

SCI-TECH NEWS

OFFICIAL BULLETIN

OF THE

IN THIS ISSUE

SCIENCE-TECHNOLOGY

ARTICLES

DIVISION
SPECIAL
LIBRARIES
ASSOCIATION

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Volume 14 - No. 3

Fall - 1960

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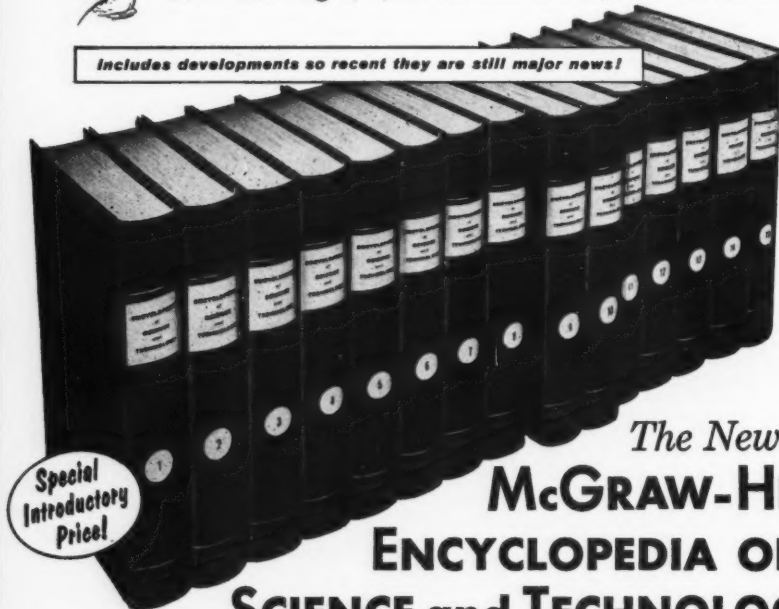
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SCI-TECH NEWS

The Official
Bulletin Of
The Science-Technology Division
Special Libraries Association

STAFF

Editor Gordon E. Randall
IBM Research Library
P. O. Box 218
Yorktown Heights, N. Y.
Associate Editor Frank G. Bennett IV
North American Aviation, Inc.
Library — General Offices
International Airport, Los Angeles 45, Calif.
Bibliography Digest Mildred Benton
U. S. Naval Research Laboratory
Washington 25, D. C.
Documentation Digest Chemistry Section
Leslie B. Poland, Editor
Research Laboratories — Ethyl Corp.
1600 West Eight Mile Road
Ferndale 20, Detroit, Mich.
Science-Technology Serials Andrew S. Glick
Lockheed Aircraft Corp.
Van Nuys, Calif.
Section, Chapter &
Committee News Rebecca Taggart
School of Aeronautical Engineering
Purdue University
Lafayette, Indiana

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MANUSCRIPTS

Division authors are invited to submit manuscripts for publication in SCI-TECH NEWS. Because of space limitations, articles should be limited to 1600 words and should be typed double-spaced on one side of the paper. Although every effort will be made to carry all valid articles received, space limitations may require some articles to be held for subsequent publication. Copy deadline is Feb. 1, April 15, Aug. 1 and Nov. 1 for the Spring, Summer, Fall and Winter issues.

SUBSCRIPTIONS

All Special Libraries Association members who elect to join the Science-Technology Division receive subscriptions to SCI-TECH NEWS. Their annual subscription fee of \$.50 is paid by the Division from the allotment of the members' dues by SLA to the Division.

Non-members may subscribe for \$1.00 per year.

ADVERTISING

For space rates on advertising, write the editor. Members may advertise at \$.50 per line; \$1.50 minimum.

OFFICES

Editorial, subscription, and advertising offices, IBM Research Library, P. O. Box 218, Yorktown Heights, N. Y. The publication office is H & S Publishing Co., Tullahoma, Tennessee.

Second class postage permit granted at Tullahoma, Tenn.

EDITORIAL

The Library Committee

There is no unanimity among librarians. As a profession we may be interested in standardization but as individual members of that profession, we reserve the right — and often exercise it loudly — to be proponents of our own evaluation on any topic of librarianship. Two librarians may participate in a congenial conversation until the subject veers to shop talk. If one approves of wooden shelves, the other turns out to be an ardent supporter of metal. The believer in a divided catalog can get an argument any time from the librarian whose catalog conforms to the strict dictionary arrangement.

With full realization that there are many who will differ, we would like to go on record as being in favor of an active library committee.

There are many functions which such a committee can and should perform. If well selected, the members of the committee are subject specialists who have intimate knowledge of the projects and programs of concern to their co-workers. With this knowledge they are able to advise the librarian on acquisitions in the fields of their specialties. They are also able to bring to the librarian and the staff knowledge of the service requirements of those they represent.

This channel of communication should not be unidirectional. The committee members are in a position to explain library policies and practices to their co-workers. There are many cases where poor library relations are caused by the failure of the clientele to understand the whys of certain library practices and policies. This lack of knowledge can be eradicated by an active, able library committee.

It is not only in the area of the clientele served that the committee can be useful. In his discussions with management the librarian frequently needs active as well as moral support. Again, if the members of the committee are well selected, if they have the recognition of management, they can be more persuasive than the most carefully compiled data.

The proper functions of the library committee does not include managing the library. This is what the librarian is paid to do and he should protect his prerogatives and responsibilities carefully. While the determination of policies is in the committee's area, putting the policies into effect is exclusively the responsibility of the librarian.

There are undoubtedly complaints that a strong committee will over ride the librarian. This situation may be more of a commentary on the librarian than it is on the

(Continued on Page 72)

FROM

SCI-TECH'S CHAIRMAN

H. S. WHITE



If for no other reason than its great size, this is a remarkable Division. Although I am well acquainted with the statistics, it is still always something of a jolt to realize that our membership, which, according to January 1 Association statistics, comprises better than 41% of the SLA total, makes up an actual majority in many of the chapters. Two of our sections are each more than twice as large as the second-largest Division.

With such great size and power comes responsibility. Our Division has contributed strongly to the work of the Association, and we can all be proud of the accomplishments of our members in a multitude of Association offices and committees.

Of late we have also begun to make our influence justly felt in our professional environment. Under the dynamic leadership of last year's chairman, Charles Bauer, we have noted the benefits which can accrue from hard-working committees on "ASTIA Coordination" and "NSF Coordination." We have seen our viewpoints considered and adopted by government officials in authority, and we have come to realize that the voice of 2200 members speaks with strength.

Under extremely capable guidance, both "Sci-Tech News" and "Scientific Meetings" have achieved an eminence which extends far beyond the bounds of the Association itself.

We can all be proud of these accomplishments, but we do not have time for contemplative self-admiration. There is still much to be done, both in the areas mentioned above, and in the new areas still untapped. I have charged the Projects Development and Evaluation Committee with the task of bringing some of these fields of endeavor to our attention, and to proceed vigorously with the job of investigating expansion of our viewpoint and influence.

With a Division of this size and complexity, it is not surprising to find us suffering from the growth disease of "Communicationitis". To alleviate this problem, I have appointed a Section and Group Projects Coordinator whose task will be not only to determine what the Sections and Groups are working on, but also to encourage them to take on worthwhile projects.

Finally, I have appointed a committee to investigate possible shortcomings in our Division and Section structure, since this problem received considerable discussion at the Cleveland meeting. Although it was decided that no action needed to be taken to limit Section affiliations, I strongly urge you to affiliate only with the sections in which you have a genuine interest, and to work hard in those of which you are a member.

The Division can only be as strong or effective a force in our profession as the members are willing to make it. We have a tremendous potential, but only you will determine how much we accomplish. This issue of "Sci-Tech News" carries the roster of Division and Section Officers and Committee Chairmen. These people all have specific tasks, but they cannot work in a vacuum. Send them your suggestions, opinions, advice, and above all, the expression of your willingness to work with them! The Division's future is in your hands.

THE LIBRARY COMMITTEE

(Starts on Page 71)

committee. As librarians we should be willing to have our activities inspected by any impartial group. If we are unable to explain and rationally justify them, we should be willing to see them changed.

If the committee members are not carefully selected, if they are not actively interested in the library, if they merely serve as "yes-men" to the librarian, then the opponents of the library committee are correct in saying that the committee is unnecessary. But that library which has a strong librarian and a strong library committee will find that two work beneficially together for the good of the library.

G.E.R.

COPY DEADLINE

Copy for the next issue of *Sci-Tech News* should be sent by November 1 to Frank G. Bennett, IV, Librarian, General Offices, North American Aviation, Inc., International Airport, Los Angeles 45, California.

IMPLEMENTING AUTOMATION IN ASTIA

COLONEL WOODROW W. DUNLOP, USAF, Commander

Armed Services Technical Information Agency, Arlington 12, Virginia

"Playhouse 90" may be the name of a popular TV program — but to us here in ASTIA, it means the business-like hum of Remington Rand's Univac Solid State 90 Computer (USS90) as it goes about its task of receiving and processing over 2,000 requests for technical reports each day. The nickname, given by the programmers, might also indicate the excitement, interest, and even drama that has accompanied the first few weeks of ASTIA's automation.

An article by Heston Heald in the March issue of *Sci-Tech News* gave a resume of the effects of automation on the users of ASTIA's services. It is the purpose here to briefly describe the USS90 and to explain the three stages being used in phasing the major functions of ASTIA under computer control. Actually, ASTIA is now operating under the first stage and in the transition process of preparing the other two; all due to be in operation in the Fall, 1960.

First, let us say a word about the computer itself. This new Univac Computer employs a highly advanced solid-state design. In the place of thousands of vacuum tubes that require much electrical power, elaborate cooling systems, and large amounts of floor space, there are many tiny magnetic amplifiers, transistors, and printed circuits that go together to make a small unit with low-power requirement, emitting very little heat. Its speeds are quite adequate for all of ASTIA's needs — in fact, its computing system performs at internal speeds commonly associated with large-scale data processing equipment.

At the present time, the principal components of USS90 are a central processor, a read-punch unit, a high-speed reader unit, and a high-speed printer unit. Of course, there is the usual auxiliary equipment such as electronic sorters, numerical collators, alphabetic punch units, reproducing punch units, alphabetic interpreters, and tabulating card files. Later, under the second and third stages, magnetic tape control units and tape drives, electric typewriters for preparing both paper tape and magnetic tape, and RANDEX (random access memory) units will be added.

The central processor is the nerve center of USS90. In addition to the operator's console, it contains the magnetic drum storage with a capacity of 5,000 ten-digit words, each with its own sign. Programs with thousands of instructions may be stored internally. These instructions may be altered as well as selected by the program itself.

The read-punch unit consists of an input card feed, a reading station, a second reading station, and two output magazines. The second reading station permits a programmed check of the information in the first reading station and that punched in the punch station. It reads, punches, and completely checks at the rate of 150 cards per minute.

The high-speed reader unit handles cards at the rate of 450 per minute. It consists of an input card feed, two reading stations, and three output magazines. Here again, the second reading station permits a programmed check of the information read in the first reading station.

The high-speed printing unit has a maximum printing rate, under magnetic tape configuration, of 600 lines per minute. Under card configuration, the speed is 450 lines per minute. Its continuous paper feed is adjustable to accommodate any width paper from four inches to 21 inches.

Prior to its present automation, ASTIA had not been directly involved in the use of any kind of data processing equipment. Everything was done manually except for a few functional areas in which mechanical equipment had been in use. Following a study to determine the best method, a three-stage plan for automation seemed to be practical.

Stage 1 involves a punch-card configuration. This permits the application of data processing techniques to the document-request functions which urgently need the increased capability. It also has the advantage that ASTIA personnel can accumulate some basic programming and operational experience while preparing for subsequent stages.

Stage 2 was planned to add six magnetic tape drives to the basic USS90. The magnetic tape permits considerable reduction in actual machine time for the applications which were implemented in Stage 1. In addition, it provides a capability for identification of documents which have been requested by information other than the ASTIA number and, similarly, identification of documents received for cataloging which are duplicates of documents already in the system. More important, the magnetic tapes provide a means for automation of the bibliographic function in terms of the AD (ASTIA Document) collection.

Initially, it was planned that the machine search would culminate in a printed list of document numbers which satisfy the search specifications. This necessitates continuing

the present practice of printing and stocking catalog cards and the subsequent manual pulling of catalog cards needed to complete a bibliography. Action is now underway to store complete cataloging information on magnetic tape. When this has been accomplished, ASTIA will have the capability of machine printing the bibliographies. In order to make this program fully effective, it is necessary to convert the cataloging information into machinable form. The nature of this task makes it imperative that it be done "in-house." The magnitude of the task is such that it is anticipated that the machine printed bibliography capability will encompass 60% of all bibliographic citations by the end of the first year after the plan is implemented. It will encompass 98% of all bibliographic citations by the end of the second year. The remaining 2% involve hand-drawn special characters which at present cannot be effectively handled in a data processing system. These will necessitate printing and stocking of catalog cards in order to provide complete bibliographic coverage.

Stage 3 provides for adding two RANDEX units to the USS90 tape system. In the RANDEX configuration, the functions performed in the tape configuration can be performed in about 20% less time. This provides an increase in computer time available for bibliography compilation.

At this time, the RANDEX configuration is not intended for use in subject matter searches. The reason for employing magnetic tape for the information retrieval process is that subject searches normally involve the entire AD collection. In such a situation, the search can actually be accomplished faster with magnetic tape than with random access devices. Random access devices are at their best when only parts of a file are involved in an application and, even then, when the identity of the desired information is **already known**. Obviously, in the field of information retrieval, this is not the case. In addition, the cost per bit of information stored in random access memory is so great as to make it completely unjustifiable for subject searches from the point of view of economics. Nevertheless, it may turn out that some of the RANDEX capacity will be used as working storage in the course of running some of the more sophisticated types of search.

In Stage 2 and Stage 3, the subject searches will be made against tapes which carry the AD number, publication date, and retrieval terms with all entries arranged serially by AD numbers. In this situation, all the information is in digital form since the retrieval terms will be represented by code numbers. The reading rate for the magnetic tape is 25,000 characters per second. Because

the computer will have to compare assigned retrieval terms with the search specifications, it is estimated that a single search involving four retrieval terms will require about 30 minutes, at the present time involving some 200,000 titles in the AD collection. Six searches, involving four terms each, can be done simultaneously in about one hour. These searches, initially, will result in printing out the AD numbers for use in pulling the catalog cards.

As the machine printed bibliography capability develops, the complete bibliographic citation will be recorded on magnetic tape. The actual subject search, in this instance have recorded the desired AD numbers on magnetic tape which is then used for the search and print out of the complete citations.

As can be seen, there are many exciting possibilities and, although ASTIA feels it will have gained important objectives in these first stages, it realizes that there are other advantages ahead. We are closely watching developments that may lead to such as automatic reproduction of reports, preparation of the **Technical Abstract Bulletin**, selection of retrieval terms, and the actual relationship of scientists and projects with existing scientific information.

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We're proud of these pioneering works; and we're sure our library staff contributes greatly by storing, controlling and rapidly disseminating these valuable data.



MACHINE LITERATURE SEARCHING — Some Capabilities and Limitations

Marjorie R. Hyslop, ASM Documentation Service

Generalizing about the capabilities and limitations of machine literature searching is probably just as dangerous as generalizing about the weather in Cleveland in spring. This is particularly true because there are probably as many systems for such machine work as there are installations, both operating and experimental. So perhaps I can be forgiven for pointing my comments primarily toward the only system with which I am thoroughly familiar: The Information Searching of the ASM Documentation Service, which started serving subscribers in January 1960 and therefore has such a short period of operating life at the time of this writing (April 15) that generalizations even about this one system cannot yet be borne out by extensive experience.

First I should like to record some statements made to me recently which may reflect some of the prevalent thinking:

"Perhaps I'm expecting too much from the computers. At least I was a little disappointed in your (A. S. M.) use of a machine for information retrieval purposes.

"Manual and conventional systems do not produce the specific information required. Subject headings, like the notations in a classification system, direct the searching librarian to literature items which may contain the information desired. The success of the system depends on wise selection of search terms and a careful review of the literature items located.

"My understanding of your system is that it will result in the user being referred to literature items in which the desired information may be found. The one basic change from a manual system is that the card catalog is mechanically rather than manually reviewed . . . I'm afraid I had expected the machine application to result in book level indexing or specific information."

One point in this statement is certainly true — namely that the user is referred to literature items rather than being fed specific information. This is true in the ASM system and, I believe, most of the others now in the development stage. It does not necessarily have to be true. Certainly systems can be designed to turn out actual information. The Eastman Minicard, which prints photocopies of documents in response to a search, might be considered as an example of this. It might even be possible to design a system of the Minicard type which would print out not a complete document but only the pages or

paragraphs carrying the desired information. I suspect, however, that the reason this is not being widely done at the present time is purely a matter of economics. The refinements which would need to be built into the system and the complex programming necessary would undoubtedly be very expensive and would not be warranted unless the system could operate on an extremely large scale. Machine retrieval today is a new-born babe — a marvel of creation but not yet able to walk or talk.

There is one statement in the above quotation which represents a complete misconception of the capabilities of machine retrieval. This statement is: "The one basic change from a manual system is that the card catalog is mechanically rather than manually reviewed." Again let me reiterate; this may be true of certain machine systems where the only improvements they offer are increased speed and labor saving. It is definitely not true of the method of indexing designed for the A. S. M. system by the genius of J. W. Perry and the keen ingenuity of Allen Kent at Western Reserve University. This system provides much more than "mechanical review of the card catalog" and certainly provides much greater degree of searching discrimination than can be obtained by "book level indexing."

Second, a brief summary of the ASM services: Two principal types of search are offered — one known as the biweekly digest (current awareness) search and the other the bibliographic search. The biweekly search is sold on a subscription basis at \$50 per month with a minimum three-month subscription period to amortize the cost of programming the machine for the search subject. The subscriber specifies the exact limits of the information he wants to receive in as much detail as he wishes. He then is sent every two weeks a selection of photocopies of typewritten abstracts of documents which bear on his subject. From examination of these abstracts he can determine which documents he wishes to consult in their entirety and procure these either from his own resources or by ordering photocopies from the ASM Documentation Service.

The bibliographic search provides back searches of previously published literature and results in typewritten bibliographies of titles and sources with abstracts where they are available. The sad part of this service is that not much of it can yet be performed

by machine. Starting in 1960 material is being indexed into the system at the rate of 35,000 abstracts per year, but the only backlog available (collected during the experimental pilot plant program) is a selection of the most important literature of 1958 and 1959. The Documentation Service, however, is prepared to supplement these machine searches by manual methods utilizing conventional indexing tools and reference sources.

The example I mentioned above to demonstrate the capabilities of machine indexing came from a man who requested both a biweekly current awareness search and a 25-year bibliography on the same subject. Here it is as he gave it to us: "Cold working of metals where displacement is caused by mechanical force at moderate to ambient temperatures — to include presswork and cold heating where metal shaping is done by flowing; to include cold forging but not hot forging; to exclude cutting, stamping, drawing and forming, and continuous extrusion; to exclude hydraulic methods as opposed to mechanical; to include wire rod and cast solid forms rather than sheet. Emphasis should be on machines and mechanisms, methods and equipment."

Now we have separate experts on machine searching and conventional searching so the question was referred to both of these individuals separately to determine, first, if the information given was sufficient and usable in a machine search, and second, to give a quotation on compilation of the bibliography.

Back to my office came two memoranda. From the conventional search expert came this: "Practically unsearchable by a conventional subject index! We would have to look at every item to see if it were pertinent." From the machine expert: "Fine; when do we start?"

What this means, of course, is that conventional subject headings and alphabetical indexes simply are not geared to this fine depth of detail and discrimination. The indexing words used are not the specific terms specified by the subscriber and published indexing simply does not define the literature in the terms in which he is interested.

Now the fact that this kind and depth of indexing IS provided by the machine system leads many people to what appears to be an obvious conclusion — namely, the person who analyzes a document and prepares what is called a "telegraphic abstract" for the machine library must (1) possess an extremely high level of technical knowledge and background, (2) spend an inordinate amount of time providing the appropriate word "hooks" or indexing terms which will provide for all of the ways in which a search question may happen to be phrased.

It so happens that exactly the opposite is true. The abstracters employed in the preparation of our machine feed — while they must naturally have some degree of familiarity with engineering and with metals and metallurgical principles — need not be anywhere near, say, the Ph.D level; likewise the preparation of the telegraphic abstract is a relatively simple operation.

This delightful paradox — and since I had nothing whatsoever to do with the development of the system I would protest any accusation of bragging — this delightful paradox impresses me more each day of our operational experience. What impresses me is the ingenuity and efficiency of the "semantic factoring" principles, the "role indicators", and the other machine paraphernalia that make the system work in such a complex fashion, yet be so easy to feed information into and get information out of.

Finally, I would like to come back to a feature which was not specifically mentioned in the conception of machine searching quoted in the statement above. This commentator mentions speed and labor saving, but a corollary aspect is currency and promptness. In our system — and I suspect in most of the others being developed today — material is encoded into the searching system within a matter of weeks of its publication or procurement, so the searching facilities are always up-to-date. This is not true of published indexes. Indexes almost invariably follow abstracts with a considerable lag. Printing and publishing consumes additional weeks and months. In fact, in most instances, indexes do not appear in print ready for searching until many months, a year, or more, after the abstracts appear in print. This improvement provided by the machines is certainly an important one where current literature must be analyzed.

So here is where lies the real future of machine retrieval — not so much in speed and convenience as in promptness and in the ability to retrieve more complete, more exact and more precise information than can be done by any of the conventional manual methods. For this reason no machine system will ever be any better than the method used to analyze the information going into it.

SPRING ISSUE COPIES NEEDED

If you have an extra copy or a no longer needed copy of the Spring issue of SCI-TECH NEWS, please send it to the Editor, IBM Research Library, P. O. Box 218, Yorktown Heights, N. Y. Our usually ample supply is exhausted and we have been unable to fill the last two requests.

ANNUAL BUSINESS MEETING Science-Technology Division June 8, 1960

SECRETARY'S MINUTES

Heston Heald moved and it was seconded and carried to accept the minutes as published in Sci-Tech News.

REPORTS

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Expenditures 2041.25

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Membership — Carl H. Losse

Total membership, as of May 20, 1960: 2190.

Scientific Meetings — John Hutchinson

Total subscription: 470
Balance on hand \$1,201.75

Sci-Tech News — Gordon E. Randall

The journal grows in size and value, due to contributions of Les Poland, Mildred Benton, Andy Glick, Rebecca Taggart, and Frank Bennett.

Vice-Chairman — H. S. White

The Convention program, the work of the vice chairman, speaks for itself.

COMMITTEE REPORTS

Archives — Florence W. Turnbull

A file cabinet has been purchased and installed at SLA Headquarters, all known Science-Technology material included in it. A filing system has been developed, and work now progresses on checking the contents of the files against the filing system.

ASTIA Coordination — Michel A. Friedlander (read by C. Bauer)

Mr. Bauer reported Mr. Friedlander's absence was due to a serious illness, and he is now recovering satisfactorily. The ASTIA Coordination Committee in a meeting with ASTIA Executive Personnel at ASTIA Hdqs. on November 23 and 24, 1959, presented a list of recommendations for the change in operational matters of ASTIA. Further, an appeal with recommendations on policy matters affecting ASTIA was submitted May 17 by the Committee Chairman to the Office of the Director of Defense Research and Engineering. The outcome of the latter appeal is presently pending.

By-laws — Margaret Firth

The Sci-Tech Advisory Committee recommends addition to paragraph D, of Section III: Section III. Board of Honor

1. The Board shall consist of Science-Technology Division members who have served as president of Special Libraries Association.
2. The members shall be asked to serve in

an advisory capacity to the Division upon the call of the Chairman of the Division.

Duplicate Exchange — George E. Halpern (read by C. Bauer)

Added members: 6; Withdrawn members: 2; Total membership: 89.

NSF Coordination — Marguerite Ritchie

Committee work has concentrated on two special projects, NSF financial support for enlargement in scope for **Scientific Meetings** and NSF support of a cumulative index of ASTIA reports backlog starting with AD No. 75,000.

Procedures — Lois Brock

Completion is hoped for by the summer, with about half the reports for a Procedures Manual received.

Special Classifications — Margaret Anderson

This committee has been inactive, and all correspondence, reports and relative information has been transferred to the incoming chairman.

Union List of Technical Publication — Philip Leslie

The committee concurs with the recommendation of the Advisory Committee and considers itself dissolved.

SECTION REPORTS

Chemistry — Leslie B. Poland

The section sponsored a dinner meeting with Dr. Brown speaking, attended by 75. Total membership is 1148. The section sponsors a new project, "Documentation Digest" (formerly done by Gertrude Schutze) in Sci Tech News. Another new project is preparation of a subject heading list of Chemical Engineering.

Engineering — Hubert E. Sauter

The section sponsored a luncheon meeting, attended by 126 (of 1167 total membership), and a panel discussion. One newsletter was distributed. Two motions were approved at the annual business meeting: 1. That a committee be formed to study the subject interests of the total membership of Engineering Section, and 2. That the section operate under the temporary by-laws until new ones are accepted.

Paper and Textiles — no report

Petroleum — Paul Knapp

The Section sponsored a forum after last year's Convention on "Cooperation and Standardization of Petroleum Libraries in Machine Methods", and the API is studying the use of machine methods in its own publications. As cosponsor of a forum with API in Dallas, Texas in February, a study team has been named to study the problem resulting in an indexing system which will be used beginning January 1961.

Pharmaceutical — Louise C. Lage

The section sponsored a business meeting, with 50 present, and a luncheon with a

speaker. Total membership is 286. Highlights of the year include extended contact with members, exchanging reports and working on regional meetings, printing of new Section stationery, gift of \$100 to Scholarship and Loan fund, returning the 8c a members allotment to the Division, and encouraging membership participation in new serial titles rather than spread such effort thinly, audit of Treasurer's 3-year records, new indexing process adopted for **Unlisted Drugs**, translation into Spanish "Drug Information Sources".

Public Utilities — Florence E. Carlton (read by Mildred E. Stone)

Two "Public Utilities Section News Notes were distributed; revised edition of "Selected List of Books for a Gas Engineering Library" is available for distribution, project for next year may be preparation of selected lists on Nucleonics, Nuclear Power, Atomic Plants, etc.

GROUP REPORTS

Boston Chapter — no report.

New York Chapter — Frances Stratton

Four meetings were held. A class on Russian was sponsored, and the Group is encouraged to continue the class. A joint meeting with New Jersey was held on "Sources of Soviet Information".

Southern California Chapter — Helen Waldron

One meeting was sponsored at which Lilian Hamrick spoke on the Information Activities of OTS.

Washington, D. C. — no report.

A motion by Ralph Phelps, seconded by Tom Minder was carried that we accept the reports as read.

NEW BUSINESS

Status of Groups in the Division

Herb White moved and Hubert Sauter seconded that the Science Technology Division recognizes the importance of divisional groups presently organized within the Chapters and requests that the Executive Board ask the Division Liaison Officer and the Chapter Liaison Officer jointly analyze the status of these Groups and insure their financial stability.

Elma Evans reported that some years ago a report was made on the status of Groups.

Publication of Convention Proceedings

Herb White moved and Andrew Glick seconded that the Science-Technology Division goes on record to request that the Executive Board agrees to the principle that Convention Proceedings shall be published as a separate publication and that it take steps leading to the formation of a firm proposal for action to be presented at the Midwinter meeting considering both the publication

(Continued on Page 82)

SCIENCE-TECHNOLOGY DISISION AND SECTION ROSTER 1960-61

Division Officers

CHAIRMAN: Herbert S. White, Manager, Engineering Library, IBM Corporation, Federal Systems Division, Kingston, New York.

VICE-CHAIRMAN & CHARIMAN-ELECT: Margaret Anderson, The RAND Corporation, 1700 Main Street, Santa Monica, California.

PAST CHAIRMAN: Charles K. Bauer, Scientific & Technical Information Dept., Lockheed Aircraft Corporation, Marietta, Georgia.

SECRETARY: Doris H. Banks, Ground Systems Division, Hughes Aircraft Company, Fullerton, California.

TREASURER: John P. Binnington, Head, Research Library, Brookhaven National Laboratory, Upton, Long Island, New York.

Committee Chairmen

ARCHIVES: Florence W. Turnbull, Sperry Gyroscope Company, Great Neck, Long Island, New York.

ASTIA COORDINATION: Michel Friedlander, Grumman Aircraft Engineering Corporation, Bethpage, Long Island, New York.

AWARDS: Jolan M. Fertig, Westinghouse Research Laboratories, Beulah Road, Churchill Borough, Pittsburg 35, Pennsylvania.

BY-LAWS: Margaret A. Firth, United Shoe Machinery Corporation, Beverly, Massachusetts.

DUPLICATE EXCHANGE: George E. Halpern, Chief Librarian, The Martin Company, Baltimore 3, Maryland.

MEMBERSHIP: Carl H. Losse, 1820 North 44th Street, Milwaukee, Wisconsin.

NSF COORDINATION: Marguerite Ritchie, ACF Electronics Division, Riverdale, Maryland.

NOMINATIONS: Charles K. Bauer, Scientific & Technical Information Dept., Lockheed Aircraft Corporation, Marietta, Georgia.

PROJECTS DEVELOPMENT & EVALUATION: Betty B. Bateman, Stanford Research Institute, Menlo Park, California.

PROCEDURES: Lois Brock, The General Tire & Rubber Company, Akron 9, Ohio.

PUBLICATIONS CHAIRMAN & EDITOR, SCI-TECH NEWS: Gordon E. Randall, IBM Research Library, Yorktown Heights, New York.

SCIENTIFIC MEETINGS EDITOR: Gertrude Bloomer, The William S. Merrell Company, Cincinnati 15, Ohio.

SCIENTIFIC MEETINGS BUSINESS MANAGER: Joan Hutchinson, 3222 Harry Lee Lane, Cincinnati 39, Ohio.

SECTION & GROUPS PROJECTS COORDINATION: **Hubert Sauter**, General Electric Company, ANPD, Cincinnati, Ohio.

SECTION & DIVISION STRUCTURE: **Lois Godfrey**, Library, Los Alamos Scientific Laboratory, Los Alamos, New Mexico.

SPECIAL CLASSIFICATIONS: **Fenton L. Kennedy**, Applied Physics Laboratory, Johns Hopkins University, 8621 Georgia

Avenue, Silver Springs, Maryland.

Section Officers CHEMISTRY

CHAIRMAN: **Fern Heim**, 1325 North 33rd Street, Lincoln 3, Nebraska.

VICE-CHAIRMAN: **Edythe Moore**, American Potash and Chemical Corp., 201 W. Washington Blvd., Whittier, California.

(Continued on Page 82)

SECTION, CHAPTER & COMMITTEE NEWS

Compiled by

REBECCA L. TAGGART



Summer vacations must have overshadowed the deadline date for copy for this column. The Boston Chapter and the Pharmaceutical Section were the only two contributors.

It was very gratifying to hear many favorable comments about this column at SLA in Cleveland. It will be even more gratifying to receive copy from all of the sections, chapters, and committees. Please address your news items to:

Rebecca L. Taggart, Librarian
School of Aeronautical and Engineering Sciences
Purdue University
Lafayette, Indiana
On with the news!

BOSTON CHAPTER

At the final meeting for the 1959-60 season of the Boston Chapter's Science Technology Division, the following officers were elected to serve for the coming year:

Chairman — **Barbara Spence**, Avco-Everett Research Laboratories.

Vice-Chairman, chairman-elect — **Emory Westcott**, Monsanto.

Secretary-Treasurer — **Barbara Hill**, Massachusetts College of Pharmacy.

A panel discussion on the procurement of government reports was moderated by **Barbara Spence**. The panel members and their topics were as follows:

Ruth Magee — ASTIA and its sources
Elizabeth Weeks — The atomic energy agencies of the United States, Great Britain and Canada.

Isabell Britton — Procurement of contract reports in the specialized and highly classified field of guided missiles and the distribution of reports by the military.

Special projects during the year were the revision of the Division's "Union List of Serial Holdings in Fourteen Industrial Li-

braries," and a Library Assistants' Training Series of four lecture discussions for beginning librarians in technical libraries.

Pharmaceutical Section

Katherine Owen will chair the Pharmaceutical Section for the coming year with **Wilma Kujawski**, Vice-Chairman, **Jerome Rauch**, Secretary, and **Evelyn Armstrong**, Treasurer.

The activities of the section for the year ranged from a welcoming letter to all new members to specialized committees for various projects. **Elizabeth Curran** headed the Pharmaceutical Libraries Directory Committee, a new committee which is surveying the heads of 85 pharmaceutical libraries for information on what the directory should include. **Mira Spinning** and **Jewell Maurice** inaugurated the work of the Section's first Archives Committee. **Mr. Donald Gholston** is the new editor of **Unlisted Drugs**, replacing **Winifred Sewell** who is undertaking the Associate Editor's responsibilities. A study of the need for revising the **Union List of Periodicals in Pharmaceutical Libraries** was conducted by **Claire McDonnell**.

A grant from **Smith, Kline and French Foundation** enabled the Joint Committee on Pharmacy College Libraries to meet during the past year. Resulting from the meeting was the suggestion that the pharmacy groups of MLA and SLA establish closer ties by exchanging reports and by holding joint regional meetings of pharmaceutical librarians.

Mrs. Martha June Zachert investigated the pharmacology schedules of **Dewey, LC**, and **NLM** classification systems. A comparative study of classifications in use at universities and industries headed by **Anne McCann** has as its goal a standard classification in areas most vital to pharmaceutical librarians.

Capitola Parnell has worked as Section coordinator for the Science Technology Publication, **SCIENTIFIC MEETINGS**.

SCIENCE-TECHNOLOGY DIVISION ADVISORY COMMITTEE MEETING

The meeting of the Advisory Committee of Science-Technology Division was called to order at 1:30 p. m. Tuesday, June 7 in the Sheraton Hotel. Attending were:

Margaret R. Anderson, Doris Banks, Betty B. Bateman, Charles K. Bauer, Keith Blair, Lois Brock, Agnes M. Brown, Lou Canter, Shirley Courtis, Mary W. Covington, Jean Davenport, Edward H. Elliott, Jolan Fertig, Margaret Firth.

Eleanor B. Gibson, Lois Godfrey, George E. Halpern, Fern Bloom Heim, Frances O. Henderson, Ann Howard, Joan Hutchinson, Fenton L. Kennedy, Paul Knapp, Louise C. Lage, Philip Leslie, Janet Malcolm, Katherine C. Owen, Ralph H. Phelps, Leslie B. Poland.

Gordon Randall, Marguerite Ritchie, Hubert Sauter, Barbara Spence, Frances M. Stratton, Rebecca L. Taggart, Florence Turnbull, Helen Waldron, Herbert S. White, Olive Whitehead, Marion Wickline, Mary Williams.

Edward H. Elliott moved and Fenton L. Kennedy seconded that the Secretary's minutes be approved as distributed. The motion was carried.

Mr. Bauer reported that Dr. Adkinson and the Executive Board had considered the resolution that a Documentation Code Committee be formed. They recommended that three other Divisions of the Association might be concerned and should be appraised of the plan. Both Metals Division and Military Librarians Division approved, but Documentation Division felt that similar action is being undertaken by other societies, and that we should not strike out in a different direction. Mr. Bauer submitted the comments of these Divisions to the Executive Board with the opinion that the Sci-Tech committee should work with representatives from all other interested associations, such as American Standards Association, American Documentation Institute, ASTIA, and others.

Mr. Bauer reported that he has submitted to the New York Public Library and to 25 other Associations involved in the controversy about complete journal translation from the Russian that the Science-Technology Division will make our membership list available if it is so desired. National Science Foundation replied that they will assign a study to a market analysis consultant, and they will pool our members. American Geographic Society will use our list. Both these groups have been referred to Headquarters.

Columbia University has invited Science-Technology Division to co-sponsor an Institute June 27 to July 1, 1960 on "Patents as a Source of Technical Information". Headquarters must co-ordinate and approve our action.

Each Section Chairman reported on discussions in the annual business meeting of the idea of limiting Division membership to one Section except by special request. Leslie B. Poland (Chemistry) reported that a slight preference was indicated for allowing some choice in memberships. Hubert Sauter (Engineering) pointed out the need was felt for a survey of the membership to determine the extent of representation in the various disciplines of Engineering; a majority expressed opposition to any change. Ann Howard (Paper and Textiles) showed a neutral reaction. Paul Knapp (Petroleum) reported a clear preference for allowing petroleum-oriented people to choose also Chemistry Section. Louise C. Lage (Pharmaceutical) reported a unanimous vote that there should be no change. Public Utilities had no representation. Margaret Firth moved and Hubert Sauter seconded and it was unanimously carried that the incoming Chairman appoint a committee to study the structure of the Division in collaboration with the study committee of the Engineering Section to present a recommendation at the next Science-Technology Advisory Committee meeting. Hubert Sauter moved and Jolan Fertig seconded that the previous Section Affiliation motion be tabled until a report comes in from the new committee. The motion was carried.

Mr. Bauer reported that he had written to all past presidents of the Association who belong to Science-Technology, recommending the formation of an honorary committee, like a Board of Regents. He has received appreciative acceptance from thirteen people. Margaret Firth stated that adding such a committee to our By-Laws requires a mail ballot. Under By-laws Paragraph D we might add a Section III as follows:

Section III BOARD OF HONOR

1. The Board shall consist of Science-Technology Division members who have served as president of Special Libraries Association.
2. The members shall be asked to serve in an advisory capacity to the Division upon the call of the Chairman of the Division.

Jolan Fertig moved and Lois Godfrey seconded that the Advisory Committee present the amendment regarding the Board of Honor to the Science-Technology Business Meeting. The motion was carried.

The Boston Chapter has petitioned the SLA Advisory Committee for a clarification of the status of a Science-Technology Chapter Group. Barbara Spence reported that response from Bill Budington was that since only four Chapters are concerned this will not be on the Agenda. Frances Stratton pointed out that the New York Chapter had had an Advisory Committee opinion that the Group

is clearly a part of the Chapter. Jan Fertig moved, Margaret Anderson seconded, and it was carried that Science-Technology Advisory Committee request the Executive Board to ask the Chapter and Division Liaison Officers to investigate the problems of Groups within Chapters. Mary Williams asked that people submit bills promptly.

Herbert White announced new committee appointments, and the meeting was adjourned at 2:45 p.m.

Doris Banks
Secretary

SCIENCE-TECHNOLOGY ROSTER

(Starts on Page 80)

SECRETARY-TREASURER: Ethel V. Lyon, Portland Cement Association, Research and Development Lab., 5420 Old Orchard Road, Skokie, Illinois.

ENGINEERING

CHAIRMAN: Louis Canter, Chief Librarian, Convair Astronautics, San Diego, California.

VICE-CHAIRMAN: George Mandel, Chief, Library, Lewis Research Center, NASA, 21000 Brookpark Road, Cleveland 35, Ohio.

SECRETARY-TREASURER: Joan Hutchinson, Apt. 4, 3222 Harry Lee Lane, Cincinnati 39, Ohio.

PAPER AND TEXTILES

CHAIRMAN: Ann L. Howard, The Mead Corp., Chillicothe, Ohio.

VICE-CHAIRMAN: Alice F. Laubach, American Enka Corp., Enka, N. C.

SECRETARY-TREASURER: Louise Allen, Crown-Zellerbach Corp., Camas, Wash.

PETROLEUM

CHAIRMAN: Maryann Duggan, Sup. Tech. Library, Field Research Laboratory, Saco-Mobil Oil Co., Inc., P. O. Box 900, Dallas 21, Texas.

PHARMACEUTICALS

CHAIRMAN: Katherine C. Owen, Librarian, Warner-Lambert Research Institute, 170 Mt. Tabor Road, Morris Plains, New Jersey.

VICE-CHAIRMAN: Wilma Kujawski, Librarian, Distillation Products Industries, Rochester 3, New York.

SECRETARY: Jerome S. Rauch, Dept. of Technical Information, Endo Laboratories, Inc., 84-40 101st. Street, Richmond Hill 18, New York.

TREASURER: Evelyn W. Armstrong, chief Librarian, Merck Sharp Dohme Research Laboratory, West Point, Pennsylvania.

PUBLIC UTILITIES

CHAIRMAN: Mildred E. Stone, Ebasco Services, Inc., 2 Rector Street, New York 6, New York.

VICE-CHAIRMAN: Mary A. Conner, Librarian, Ohio Power Company, Canton 2, Ohio.
SECRETARY: Catherine A. Simms, Librarian, Technology Center, Institute of Gas Technology, 17 West 34th Street, Chicago 16, Illinois.

ANNUAL BUSINESS MEETING

(Starts on Page 79)

within the Association and by commercial sources.

Roy Holleman announced that this is under consideration by the Board and that this action will add impetus.

The motion carried.

CHAIRMAN'S REPORT — C. K. BAUER

In summary, Mr. Bauer proposed two recommendations: 1. That an appropriate committee work to broaden our statement of objectives and 2. That a Standing Committee be appointed to promote more active participation, coordination, etc. between sections, groups and within the Division.

Mr. Bauer announced the establishment of the Board of Honor composed of past Association presidents who are members of Sci-Tech Division. Present and so honored, were Irene Strieby, Gretchen Little, and Kathryn Kinder.

SCIENCE-TECHNOLOGY DIVISION AWARD

Dr. Fertig announced that the award was established in Chicago, and suggestions were requested. The committee recommended two awards, Miss Margaret A. Firth and Mr. Gordon E. Randall, Mr. Bauer presented these awards.

ELECTION RESULTS — EDWARD H.

ELLIOTT (read by C. K. Bauer)

Incoming Chairman is Herbert S. White
Vice-chairman, Chairman-Elect is Margaret Anderson

Treasurer is John Binnington

Andrew Glick moved and Lois Brock seconded that the meeting be adjourned. The meeting was adjourned.

Doris H. Banks
Secretary

CHEMICAL ABSTRACTS BACKLOG

Lack of qualified abstractors has resulted in Chemical Abstracts building a backlog of over 2000 Russian articles. The major portion of this material is classed as general and physical chemistry, mineralogical and geological chemistry, metallurgy, biological chemistry, fuel and coal products, petroleum, lubricants and asphalt. If you have an interest in abstracting, a knowledge of technical Russian, and a background in any of these fields, offer your services to Dr. D. B. Baker, editor of Chemical Abstracts.

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by E. N. Lyustikh

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by B. N. Ivakin

This book discusses the problems of the structure of waves propagating in continuous nonhomogeneous and generally absorbing media, with a single spatial coordinate, over intervals infinitesimally small or comparable with 1 wavelength (microstructure) and over intervals larger or appreciably larger than a wavelength (macrostructure). The solutions of the wave problems posed are presented in operator notation, making it possible to study nonsteady-state oscillations, although detailed calculations and graphs for steady-state sinusoidal oscillations as well.

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Volume 4 Investigation of the Mechanism of Earthquakes

by O. D. Gotsadze

The results of work conducted by the Geophysics Institute of the Academy of Sciences, USSR, since 1948 on the investigation of fault plane displacements are documented in this volume. During this period a method was evolved which makes it possible to determine the mechanical type of fractures at the focus, the dip and strike of the fault plane, and the direction of the displacement and order of the relative intensity of the first shock. Many of the methodological conclusions and results of interpretations are being published for the first time.

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RICHARD A. MOUNTAIN

If Federal Government libraries were allowed funds for advertising vacancies, the following notice might appear in print:

The libraries which belong to the Council of Librarians of the West Coast Navy Laboratories in California maintain high standards. They want to hire the best people to fill their vacancies. These libraries are located at the Navy Electronics Laboratory, San Diego; the Naval Ordnance Test Station, China Lake and Pasedena; the Naval Missile Center, Point Mugu; the Naval Civil Engineering Laboratory, Port Hueneme; the Naval Postgraduate School, Monterey; the Naval Ordnance Laboratory, Corona; and the Naval Radiological Defense Laboratory, San Francisco.

The administrators of these libraries are confronted with the problem so common to all libraries, namely that of finding trained librarians to fill professional positions. Like many other libraries, in order to give service to patrons, they are filling their staffs with inexperienced and untrained people.

Why such a lack of interest in working for Civil Service? Is it the low salaries, job insecurity, lack of professional recognition, lack of promotional opportunities, or the geographical locations? It could not be the leave privileges and retirement benefits for there are none better!

per annum. They are eligible for promotion to a GS-9 for \$5,985 per annum after one year's experience. Bibliographers and branch supervisors are usually at the GS-11 level for \$7,200 per annum. Library administrators are usually at the GS-12 level for \$8,330 per annum.

Another problem facing the libraries under Civil Service is the Civil Service. All librarians must be hired from the Civil Service Register of librarians available. Many applicants dislike filling out the numerous forms necessary for application and security clearances.

What about professional recognition? Librarians in Civil Service are always free to write articles for professional publication and are encouraged to do so. It is true that it is difficult for Civil Service librarians to get their per diem expenses paid to attend professional meetings. However, the Federal Government is very liberal about granting professional leave to personnel desiring to attend professional meetings.¹

The geographical locations of the laboratories probably play an important part in an applicant's consideration of one of our library positions. The Naval Ordnance Test Station at China Lake is located in the Mojave Desert. It has a fine library and is engaged in a very important role in the defense research effort. Yet it finds that its choice of applicants is

limited to those who prefer the desert climate.

The Naval Missile Center at Point Mugu and the Naval Civil Engineering Laboratory at Port Hueneme have everything ideal to offer in the way of climate, but have little to offer in recreational and cultural advantages.

The Naval Radiological Defense Laboratory at San Francisco, the Naval Postgraduate School at Monterey, the Naval Ordnance Test Station Annex at Pasadena, the Naval Ordnance Laboratory in Corona and the Navy Electronics Laboratory in San Diego have excellent climates and enviable recreational and cultural opportunities. Yet even they have their problems in recruiting librarians.

The problems that have been mentioned in this article probably are familiar and applicable to the hundreds of small industrial technical libraries throughout the nation. It is my belief that only the large industrial companies which have cost plus government contracts are among the few that pay the large salaries to experienced technical librarians. There are enough of these, however, to take the few qualified people off the market. This leaves the library administrator two choices. He may employ untrained, inexperienced recent graduates from library schools and attempt to start them from scratch; or he may select the most promising of his unprofessional employees and make professional librarians out of them.

In conclusion, the library administrators of most government libraries find that their number one problem is that of recruiting qualified librarians. There seems to be no adequate solution to this problem at the present time. Perhaps the answer may be found in publicity, such as this article.

SCIENCE-TECHNOLOGY DIVISION BUDGET

Each year the Division is required to submit to SLA Headquarters its budget estimate for the ensuing year. It is published here so that Section Chairmen and others who have occasion to submit charges to be paid from the Division treasury can have a guide to the financial assistance they can reasonably expect from the Treasurer.

Budget — 1960-1961

Estimated Income	
Division Allotment	\$1500.00
Scientific Meetings Surplus	300.00
Sci-Tech News Subscriptions	75.00
Sci-Tech News Advertising	1500.00
Total Income	\$3375.00
Estimated Expenditures	
Section Allotments	
Chemistry	\$90.00
Engineering	90.00
Paper & Textiles	8.00
Petroleum	20.00
Pharmaceutical	20.00
Public Utilities	9.00
	237.00
Sci-Tech News Printing & Mailing	2400.00
Division Supplies, Equipment & Printing	50.00
Postage (Correspondence)	25.00
Headquarters Envelopes & Mailing	250.00
Convention Expenses	75.00
Contingencies	100.00
Total Expenditures	\$3137.00
Reserve	
Income over Expenditures	\$238.00

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BIBLIOGRAPHY DIGEST

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ALUMINUM

- 120. Aluminum and its alloys. Some aspects of research and technical progress reported.**

E. Elliott. *Metallurgia* 59:79-85, 109-116, Feb., Mar. 1959.

A digest covering 222 references. (Feb.) production, melting, and casting, working, jointing; (Mar.) constitution, properties, corrosion, protection, applications, standards.

- 121. Aluminum and its alloys in 1959.**

E. Elliott. *Metallurgia* 61:123-131, Mar. 1960.

Literature review, with 193 items, of research and technical progress, with reference to extraction, foundry practice, fabrication, constitution, properties and standardization.

- 122. Aluminum 1959.**

F. C. Porter. *Corrosion Prevention and Control* 7:33-44, Jan. 1960.

Review, with 162 references published in 1959.

- 123. Electropolishing of aluminum, review and literature survey.**

Met. Finishing 57:80-84, Sept. 1959.

108 references to literature abstracts and patents based on Chemical Abstracts, on electropolishing of aluminum and its alloys, arranged according to year of publication, alphabetically by author.

- 124. Hypereutectic aluminum-silicon alloys: A review of published information.**

A. P. Bates. *Metallurgia* 61:70-81, Feb. 1960.

Structure, including refining of primary Si (by Na, P, Na plus P or other additions) and modification of the eutectic; mechanical properties of cast alloys at room temperature, effect of heat treatment, properties at elevated temperatures, thermal properties, dimensional stability, effect of composition, fatigue behavior, are covered in the 41 references.

BRITTLE FRACTURE

- 125. Research on the mechanism of brittle fracture.**

P. E. Lagasse. *Soudage et Techniques Commexes* 13: 91-397, Sept.-Oct. 1959.

Review of literature on brittle fracture, crack initiation, propagation and twinning in steel weldments. Includes 38 references.

- 126. Selected references on brittle fracture.**
D. Owens and L. Doss. Columbus, Ohio, Battelle Memorial Institute, Defense Metals Information Center, May 5, 1960. 63p. (Memo. 55)

The 822 non-annotated references are categorized and

cross-referenced according to: testing techniques, low-temperature fracture, fracture of welded structures and nonferrous materials, influence of processing, temper brittleness, hydrogen embrittlement, influence of composition on brittle fracture, ductile-to-brittle transition, and stress-corrosion cracking.

CORROSION

- 127. Bibliographies of corrosion products.**
Corrosion 16:1311t-135t, Mar. 1960.

Selected abstracts on identification and composition of corrosion products on Co, Cu, Cr, Ni, and Mo and their alloys, prepared by Technical Unit Committee T-3B on Corrosion Products.

Section I of the Bibliography appeared in *Corrosion* 13:111t, Feb. 1957, and Section II was in the Sept. 1957 issue, p. 565t.

- 128. La Corrosion sous contrainte. (Stress corrosion.)**

J. Dirian, H. Coriuo and L. Grall. France, Gif-sur-Yvette (S. et O.), L'Energie Atomique, Service de Documentation, 1959. 51p. (B. P. 2)

A collection of 249 references, with abstracts, in French, concerning the study of stress corrosion from both a theoretical and practical point of view with regards to steels, light alloys, various metals and alloys.

- 129. Guide for practical preservation with VCI.**

Ralph L. LeMar. Rock Island, Ill., Rock Island Arsenal Laboratory, July. 6, 1959. 30p. (Rept. 59-1820) (PB 144387)

VCI literature was surveyed for information which would provide packaging engineers with the detailed data that was necessary to utilize more readily, volatile corrosion inhibitors. This information was organized into sections as follows: (A) official documents, (B) general application fundamentals, (C) environmental effects, (D) VCI compatibility, (1) among different VCI materials, (2) with bearings, (3) with nonferrous metals, (4) with surface coatings and plates, (5) with nonmetals.

- 130. Low-temperature boiler corrosion and deposits.**

P. D. Moskovits. *Indus. Eng. Chem.* 51: 1305-1312, Oct. 1959.

A literature review on the formation and effects of sulfur trioxide in furnace gases arising from coal and oil firing and leading to corrosion in economizers and air heaters. Includes 103 references, nearly all later than 1950 and mostly British.

- 131. Zirconium corrosion, literature search.**
William E. Bost. Oak Ridge, Tenn. Atomic Energy Commission, Feb. 1960. 34p. (TID 3548)

Available from OTS. Results of a literature search comprising references to 317 unclassified reports and published literature are presented.

EXPLOSIVES

132. Bibliography on explosive metal working.

C. T. Olofson and F. W. Boulger. Columbus, Ohio, Battelle Memorial Institute. Defense Metals Information Center, April 7, 1960. 15p. (Memo. 51)

Includes 210 non-annotated references, listed alphabetically by author, covering various aspects of the use of explosive energy in metal-working operations.

133. Modern explosives.

W. Taylor. London, Royal Institute of Chemistry, 1959. 63p. (Lectures, Monographs and Reports 5)

A review with 87 references, covering the nature and mechanism of explosion and detonation, evolution of commercial explosives, and special applications, including brief note on use in metal working.

134. Spherical explosives in sea water.

S. A. Berger and M. Holt. Providence, R. I., Brown University, Division of Applied Mathematics, Apr. 1959. 155 p. (Tech. Rept. 19)

An extensive and very complete bibliography covering the entire field, but mainly from the theoretical standpoint, is included on p. 130-132.

FRAZIL ICE

135. Frazil ice. A review of its properties, with a selected bibliography.

G. P. Williams. Eng. J. 42:55-60, Nov. 1959.

As no publication is available in English, apparently, which summarizes these more recent developments, this survey of existing information has been prepared, accompanied by 73 selected references.

GALLIUM

136. Gallium: a "new" metal.

R. Reinmann. Schweizer Arch. 26: 39-44, Jan. 1960.

In German. A survey covering occurrence, properties, extraction, purification, applications (particularly for semiconductors), including 33 references.

137. Physical properties of gallium.

H. J. Murphy. Cleveland, Ohio, John Carroll University, Department of Physics, Dec. 15, 1959. 45p. (Tech. Rept. 2)

A bibliography of 60 non-annotated references is included. They cover mechanical, thermal, electrical, magnetic, optical, atomic, and crystallographic properties of the element.

138. The present state of the analytical chemistry of gallium, indium, and thallium.

T. V. Cherkashina and V. M. Vladimirova. Zavodskaya Lab. 26:1307-1308, 1959.

In Russian. A review with 118 references.

GLASS

139. A bibliography of glass (from the earliest records to 1940.)

George S. Duncan, ed. by Violet Dimbleby. New York, Stechert-Hafner, Inc., 1960. 650p.

This bibliography comprising 16,000 entries, with a subject index, covers the subject from raw materials and history of glass to manufacture, types and uses.

140. Bibliography on glass structure.

Basic Science Division, American Ceramic Society. Glass Indus. 41:396-397, Jly. 1960.

The complete bibliography contains 420 references (some with annotations) for the period 1955-1958. Only 13 items appear in this issue. Others will be published monthly in 1961.

MAGNETOHYDRODYNAMICS

141. Bibliography on magnetohydrodynamics.

L. Chasen. Philadelphia, Pa., General Electric Co., Apr. 15, 1960. 15p. (T.I.S. Rept. R60SD300) (AD-235 868)

A total of 195 references are listed alphabetically by author or corporate author covering the period 1954 to 1959. Subjects also included are plasma physics, electric-discharge plasmas, and high-temperature research.

142. Bibliography on magnetohydrodynamics, plasma physics, and controlled thermonuclear processes.

B. A. Spence. Everett, Mass., Avco Research Laboratory, Oct. 1959. 97p. (Rept. AMP 36) (AD-233 709)

References to books, reports, conference proceedings and papers published in the open literature between 1925 and September 1959 are included. Arrangement is alphabetical by either personal or corporate author, with a separate author index. There are no annotations.

MASERS

143. A bibliography on solid-state masers.

A. E. Siegman. Stanford, Calif., Stanford Electronics Laboratories, Apr. 29, 1960. 28p. (Tech. Rept. 156-6)

A rather complete listing of journal articles up to April 1960, arranged by type of maser. This arrangement is preceded by review articles on masers and parametric amplifiers.

144. Operating characteristics of an ammonia beam maser.

F. S. Barnes. Inst. Radio Engrs. Proc. 47:2085-2098, Dec. 1959.

Includes a bibliography of 51 references.

145. Parametric devices and masers: an annotated bibliography.

E. Mount and B. Begg. Inst. Radio Engrs. Trans. MTT-8:222-243, Mar. 1960.

This annotated bibliography of 379 references is restricted to books and periodicals published prior to October 1959.

MATERIALS

146. Materials for environmental extremes.

G. Sideris. Electronics 32:81-96, Dec. 4, 1959.

This review article, containing 29 references, is divid-

ed into three main parts dealing with: problems raised by the effect of heat, nuclear radiation and stress on electronics equipment; the effect of high temperatures and nuclear radiation on electrical insulation, conductors, magnetic materials, transducer materials, semiconductors, bearings and lubricants; and selection of contacting metals, plating processes, protective coatings and insulating materials.

- 147. A review of the Air Force materials research and development program.**
H. H. Maxwell. Dayton, Ohio, Wright Air Development Center, Dec. 1958. 211p. (Tech. Rept. 53-373, Suppl. 5) (PB 111 648)

The 303 reports abstracted cover research in: adhesives, biochemistry, electronic materials, materials physics, metallurgy, packaging, petroleum products, plastics, protective treatments, rubber and textiles.

- 148. A review of the Air Force materials research and development program.**
H. H. Maxwell. Dayton, Ohio, Wright Air Development Center, Nov. 1959. 163p. (Tech. Rept. 53-373, Suppl. 6) (PB 111 648)

212 technical reports and notes written from July 1958 through June 1959 are abstracted. Fields covered are adhesives, biochemistry, electronic materials, metallurgy, plastics, protective treatments, rubber and textiles.

- 149. Sixth materials review.**
Arthur Lyem. Army Chemical Center, Md., Army Chemical Warfare Laboratories, Nov. 1959. 93p. (Spec. Pub. 4-11) (PB 161 463)

244 references appear in this periodic review, the purpose of which is to present information on important technical and scientific highlights regarding materials research here and abroad, principally in the polymer and plastics field.

- 150. Thermophysical properties of solid materials.**
Alexander Goldsmith and Thomas E. Waterman. Chicago, Ill., Armour Research Foundation, Jan. 1959. 426p. (WADC Tech. Rept. 58-476) (AD-207 905) (PB 151 715)

A list of 155 references, arranged chronologically by year of publication, gives complete bibliographic notations for all the references from which data was extracted. The author index is arranged alphabetically with each entry cross-referenced to the list of references and the materials index. Materials included are generally those with melting points in excess of 1000°F.

MICROSCOPY

- 151. International bibliography of electron microscopy. v. 1, 1950-1955.**
New York, New York Society of Electron Microscopists, 1959. 166p.

This, the first volume of a series of projected cumulations of references published earlier on edgenotched cards, is an attempt to include all papers that report or review original research with, or upon, the electron microscope. Includes 4,054 non-annotated references.

- 152. Principles of high-temperature microscopy.**

B. B. Brenden, H. Newkirk and J. L. Bates. Am. Ceramic Soc. J. 43:246-251, May 1960.

An extensive summary of literature (51 references) is presented which deals with (1) design of microscope objectives suitable for high-temperature work, (2) design of high-temperature microscope stages and furnaces, and (3) problems of high-temperature photomicrography.

NIOBIUM

- 153. Niobium. A bibliography — 1956-1959.**
Helen C. Friedemann. Bayside, N. Y., Sylvania Corning Nuclear Corp., 1959. 80p.

This is a bibliography of 460 references, with abstracts and a subject index, published since the 1300 references "Bibliography on Columbium" (niobium) issued by the Fansteel Metallurgical Co. in August 1956.

- 154. Niobium (columbium)—its future prospects.**
J. Sandor. Metallurgia 59:185-194, Apr. 1959.

A survey of the literature (20 references). History, sources, consumption, extracts, uses.

OXIDATION

- 155. The oxidation of Cr, Hf, Mo, Nb, Ta, Ti, W, V, Zr and some of their alloys; properties of some borides, carbides, nitrides and oxides of the same metals. A bibliography.**
E. A. Cernak. Middletown, Conn., United Aircraft Corp., Pratt and Whitney Division, Dec. 15, 1959. 99p.

This bibliography of 922 references covers the period 1951 to September 1959.

- 156. Oxidation of metals.**
Walter W. Smeltzer and Lyndon H. Everett. Indus. Eng. Chem. 51:406-411, Mar. 1959.

196 references are to be found in this review of oxidation of metals including theory, metal oxides, and alloy oxidation.

- 157. Oxidation phenomena on germanium surfaces.**

Mino Green. Progress in Semiconductors 4:35-62, 1960.

68 references are included.

POWER SOURCES

- 158. Applied solar energy research. A directory of world activities and bibliography of significant literature.**
ed. by Jean Smith Jensen. Phoenix, Ariz., Association for Applied Solar Energy, 1959. 275p.

2916 references, mostly annotated, are included in this second edition (first was published in 1955). An attempt was made to fill in material published up to 1954, as well as to add new material. Arrangement is by subject classification, i.e., sources of energy, solar radiation, use of solar energy as heat-low temperature conversion, use as heat-high temperature conversion, and use of solar energy as light.

159. Bibliography on unconventional sources of electrical power.

John B. Forlini. Fort Belvoir, Va., Army Engineer Research and Development Laboratories, Nov. 1959. 24p. (LTIS Bib. 1) (AD-231 326)

There are 102 references listed, some with abstracts. No introductory statement is given as to coverage, method of selection or period of time.

160. Fuel cells as energy converters.

J. F. Yeager. IN Kaye, Joseph and Welch, J. A., eds., *Direct Conversion of Heat to Electricity*, p. 23-1-23-15, New York, Wiley, 1960.

A state-of-the-art summary with 33 references.

161. Secondary power sources (bibliography).

Tech. Trans. (OTS) 59-22161, Sept. 24, 1959. 32p.

Translations from Soviet open sources, 1955-1959. Order from LC or SLA.

Contains 285 references. Entries are alphabetically arranged under the following headings: (1) nuclear batteries, (2) solar power plants, (3) photoelectric effects, (4) solar batteries, (5) thermoelectric effects, (6) semiconductors, (7) energy converters, and (8) miscellaneous. A list of the 31 periodicals exploited is included. All entries are later than 1954.

SEMICONDUCTORS

162. Bibliography on semiconductors for thermoelectric use.

E. H. Illsley and H. Kato. Washington, D. C., U. S. Department of the Interior, Bureau of Mines, 1959. 28p. (Info. Circ. 7910)

The 131 annotated references are grouped in the following categories: general references; Peltier effect; thermoelectric and thermal conductivity theory and related topics; experimental methods, materials and applications; and studies of tellurides and selenides.

163. Influence of pressure on some semiconductor properties.

Jean Robin. *J. Phys. et Radium* 21: 130-140, 1960.

A review with 59 references.

164. A review of semiconductor switching devices and associated design requirements.

A. W. Matz. *A.T.E.J.* 15:61-82, Jan. 1959.

An extensive literature survey comprising 131 references is given.

165. Solid state power inversion techniques.

D. A. Paynter, B. D. Bedford and J. D. Harnden. *Semiconductor Prod.* 3:50-55, Apr. 1960.

Includes references on solid state inverters, thyatron type inverters, multijunction semiconductor switching devices, and patents related to saturable core transistor circuits.

SOUND

166. Sound production and sound reception by insects, a bibliography.

Mabel Frings and Hubert Frings. University Park, Pa., Pennsylvania State University Press, 1960. 108p.

This bibliography includes 1752 references, arranged alphabetically by authors, followed by two indexes, a taxonomic index and an abbreviated subject index.

167. Sources and propagation of underwater sound: a biblioabstract.

J. A. Murphy and J. E. Doolittle. Schenectady, N. Y., General Electric Co., Mar. 1, 1959. 28p. (Rept. 59-GL62)

References on electric sparks, explosives, water jets and resonators are included among the 101 items taken from open literature and government reports, 1948-1959, during a literature survey on sources, propagation and transmission of low-frequency underwater sound.

168. Thermosonics.

S. Parthasarathy. *J. Sci. Indus. Res.* 18A:13-16, Jan. 1959.

Twenty-five references appear in this literature survey of a new branch of acoustics dealing with the relation between sound and heat energies, and its applications in physics and chemistry.

169. Ultrasonic detection of defects. General examination of factors affecting the significance of the results obtained by echo sounding.

B. R. Byrne. *Rev. Met.* 56:231-256, Jly. 1959.

Includes a review of the literature. Fifty-two references are listed.

STEEL

170. Forgeability of steels: A critical survey of the literature.

G. P. Contractor and W. A. Morgan. *Metal Treatment* 26:65-71, Feb. 1959.

Includes 43 references.

171. Mechanism of hardening in 17-7pH stainless steel.

E. E. Underwood, R. E. Maringer and G. K. Manning. Columbus, Ohio, Battelle Memorial Institute, Aug. 25, 1959. 20p. (Quart. Rept. 1) (Contract AF33 (616)6521) (AD-225 733)

This report consists primarily of an evaluation of the literature (81 references) pertaining to age-hardenable stainless steels.

172. The properties of steel at elevated temperatures: A review of the literature published during 1957.

A. Krisch. *Stahl und Eisen* 79:1146-1151, Aug. 6, 1959.

In German. Effect of chemical composition and effect of structure are covered in the 114 references which are included.

TRANSDUCERS

173. Magnetic logical transducers.

O. Stram and S. Einhorn. Paoli, Pa., Burroughs Corp. Research Center, Jly. 15, 1959. 31p. (Sci. Rept. 1) (Contract AF 33(616)(6355)

Includes a listing of 68 references covering methods of generating unique input-output logical relations by means of magnetic phenomena.

174. Some notes on the history of parametric transducers.
W. W. Mumford. Inst. Radio Engrs. Proc. 48:848-853, May 1960.

The history of the development of parametric principles and devices, from 1831 to the present, is summarized in this review. The chronology presented is supported by 200 selected references.

WAVE PROPAGATION

175. Bibliography on electromagnetic wave propagation.

A. Matschke. New York, Sylvania Electric Products, Inc., Electronic Defense Laboratory, Apr. 1, 1959. 77p. (Rept. M186) (Contract DA 36-039-sc-78281) (AD-216 404)

Provides an up-to-date (1947-1958) reference to publications from laboratories interested in upper atmospheric research, namely, Cavendish, University of Cambridge, Cornell Electrical Engineering Department, Pennsylvania State Ionospheric Research, Stanford Radio Propagation, and Stanford Research Institute. Subject divisions are General Properties of the Atmosphere, Electromagnetic Wave Propagation in the Ionosphere, Meteor Burst Propagation, Electromagnetic Wave Propagation in the Troposphere, and Radio Astronomy.

There are no annotations for the 814 entries.

176. Bibliography (on) theory of forward scatter propagation of radio waves.

J. Stelwagen. The Hague, Netherlands, Technisch Documentatie en Informatie

Centrum voor de Krijgsmacht, Jly. 1959. 56p. (Rept. TDCK 18503) (AD-233 552)

This bibliography contains 206 abstracts of reports and articles on tropospheric and ionospheric forward scatter propagation far beyond the horizon. Abstracts, compiled from card indexes of R.D.C.K. and Electrical Engineering Abstracts, are arranged chronologically and cover the period 1947 to 1959 (autumn).

177. Checklist of references to literature on tropospheric propagation of UHF, VHF, and SHF radio waves (1929-1959).

W. Nupen. Boulder, Colo., National Bureau of Standards, Jly. 28, 1959. 53p. (Rept. 6055) (Suppl. 1 to Rept. 6001)

This compilation of 221 annotated references on high frequency (300 to 30,000 Mc) waves was prepared by Meteorological Abstracts and Bibliography (American Meteorological Society) for the National Bureau of Standards.

178. Selective annotated bibliography on propagation of acoustic and explosion waves in the atmosphere. Supplement, 1959.

Geza Thuronyi. Meteorol. Abs. and Bib. 10:1072-1098, Jly. 1959.

This compilation, covering the period 1950-1959, brings up to date an earlier bibliography published in Meteorol. Abs. and Bib. 1:670-686, Oct. 1950. Items are arranged chronologically by year and alphabetically within each year.

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THE MAIL BAG

STANDARDS

Samuel Sass, Librarian, The William Stanley Library, General Electric, Pittsfield, Mass.

As Chairman of the SLA Professional Standards Committee, I want to comment on C. G. Stevenson's excellent article, "Some Further Thoughts on Standards", which appeared in the Summer, 1960, issue of Sci-Tech News.

Although there was emphasis on "work standards" at one of the general sessions in Atlantic City last year, the Professional Standards Committee has since decided to direct its immediate attention to the formulation of basic standards such as Mr. Stevenson suggests. This is a decision based not only on the Committee's own thinking but also on the reports of the standards discussion groups which met at the Atlantic City meeting.

In the Committee's annual report to the Executive Board it was recommended that standards be established in the following areas:

1. Objectives of the library
2. Services necessary in order to carry out the stated objectives
3. Collection
4. Staff
5. Space and equipment
6. Budget

The Committee is now at work on a plan to develop the standards with the aid of the various SLA divisions. It is hoped that membership participation on the division level will speed up the process and will also result in more realistic standards.

* * *

THE FUNCTION OF THE LIBRARIAN

George E. Halpern, Chief, Libraries Section, The Martin Co., Baltimore 3, Maryland

It seems to me that it behooves a manager to review periodically his responsibilities to the organization as well as the functions performed as part of these responsibilities.

A group in an organization has a definite mission to perform. Objectives and responsibilities must be revised periodically to conform to the mission. At the same time, it must be borne in mind that in this age of specialization, the missions, too, have become specialized. In this light it is unthinkable to have an information group or Library perform its own transportation or maintenance work. A manager of a patent group or a

project engineer would be rendering his organization a disservice if he attempted to compete with routine maintenance or shipping activities. In times of emergency, there is of course no excuse for not attending to the immediate needs and thus the engineer may conceivably become a truck driver for a short time!

In my opinion, in our field as information management experts, it is our duty to review periodically the numerous functions which frequently grow topsy in our own group. Should it be discovered that some of these functions could be performed more economically by another group — why not transfer the function? To attempt to keep these functions in the group is not only uneconomical for the main organization, it is also a sign of mismanagement, petty empire-building, and surely it dilutes the technical professional contribution that we can make with our group.

Please note that I have not attempted to answer the question raised by the editorial — what are the proper functions of a librarian — for two reasons:

In the first place we cannot talk about functions until we have defined the responsibilities. The responsibilities of an information expert vary so much from organization to organization that I think it is difficult to come much closer with a definition than re-stating the SLA motto: "Putting Knowledge to Work".

In the second place, I think that we should not attempt to define the function as exercised under the responsibilities except as common sense principles of good management. The means or actual function by which the responsibilities are exercised will vary according to needs, resources and talents in manpower, equipment and will certainly change with technological progress. For this reason we must be particularly aware of the latest technical developments, such as may occur in data processing, display, reproduction and communication means.

The assigned responsibility to put knowledge to work remains ours and can not and should not be delegated. Many of the functions, however, such as operating data processing equipment, shipping of reports, reproductions, etc., can very well be performed more efficiently if centralized and specialized service organizations are available.

CHEMICAL ABSTRACTS

(ED. NOTE: The following letter was sent to Dr. D. B. Baker, editor, CHEMICAL ABSTRACTS, with a copy to SCI-TECH NEWS for publication to encourage other comments on the problem.)

**Anna M. Coleman, Librarian,
Dow Corning Corp., Midland, Michigan**

The current issue of *Chem. Eng. News* carries the information that the price of *Chemical Abstracts* is to climb to \$925 for 1961. For that kind of money we should get indexes.

Have you, yourself, ever had to sit down and scan, item by item, several sections in each issue of CA over a two-and-a-half-year period? You should, in order to convince yourself that the protests from literature chemists are not ebullitions of childish petulance, but valid statements of a valid problem. Remember to bring any search up to date in CA, we have to do just that, every time.

When the 1960 price increase to \$520 was announced I wrote to *Chemical Abstracts* that I felt that it was entirely reasonable, and that our library could well afford to pay it, if the indexes were made available. Mr. Belknap sent me a nice reply, saying that mine was the only letter he had received which spoke kindly of the price increase. But the punchline was the "if". The extra labor charges necessitated by the delay in receiving annual and decennial indexes multiplied by the number of chemical libraries where they are incurred is an enormous figure. And if we're to pay \$925 each, we shouldn't have to pay these charges too.

Recently I received a copy of a letter sent by Dr. F. L. Taylor of the Dow Chemical Company to the members of the American Chemical Society Committee on Publications, with copies to you and to Dr. Bernier. In it he made some suggestions which deserve real consideration. One was that abstracts be numbered, so that indexing would not need to wait for page proof. Another was that detailed informative abstracts of papers from ACS publications be omitted. (The same suggestions was made at the Atlantic City meeting.) Why should CA replace on library shelves all other ACS journals, for instance the *Journal of the American Chemical Society*? Granted that many subscriptions to CA go abroad, why is not, or should not, the same be true of the *Journal of the American Chemical Society*?

I am not complaining about even this price increase. But for it we should get indexes.

ED. NOTE: When Anna Coleman's letter to Dr. Baker was received for inclusion in the Mail Bag, it seemed only fair to offer space in the column to Dr. Baker for his public reply to Miss Coleman. This offer was accept-

ed and Dr. Baker's reply is as follows.

D. B. Baker, Editor, Chemical Abstracts

Thank you for this opportunity to comment on Miss Anna M. Coleman's letter of July 21 regarding the prices of the *Chemical Abstracts* service in relation to the lag in our subject and formula indexes. I wrote Miss Coleman on July 29 that the ACS staff responsible for *Chemical Abstracts* (CA) and the ACS Board of Directors who determine policy agree completely that this delay in our subject and formula indexes is a most serious and critical problem. "No stone has been left unturned" in our search for a solution. Fortunately, we are well along the road to its solution and we shall be up to date in indexing in Volume 56 (1962) which will be out in normal time. (See articles in *Chem. Eng. News* 38, No. 1, 93-94; No. 19 70-2 (1960)) We could not increase the rate of this catch-up program without sacrificing many built-in "quality" features of our indexes. We hope and believe that the many users of CA agree that such steps should not be taken. CA has long been edited and produced with a strong belief that thorough and thoroughly good indexes are essential in a truly available, permanent record of chemistry. The significant characteristics of good indexes are (1) accuracy, (2) consistency, (3) completeness of coverage, (4) convenience of form, (5) scientific integrity, and (6) promptness in appearance. The CA staff works hard to accomplish all of these purposes.

With the appearance of our Volume 52 (1958) Subject, Formula, and Ring Indexes in July and August, 1960, we are 14 months behind normal dates of delivery of May and June in the year following the completion of the volume. The volume 53 (1959) and Volume 54 (1960) indexes are scheduled to appear in 1961 as we are now working on an eight-and-a-half-month indexing and index-editing schedule. The time for appearance of indexes has been: Volume 48, 12.5 months; Volume 49, 16 months; Volume 50, 18 months; Volume 51, 14.5 months; Volume 52, 11.5 months. Three more months will be gained on the Volume 55 (1961) indexes and then Volume 56 (1962) will appear on time. Just the printing of these huge indexes, which have often been said to be the finest in the world, requires four-and-a-half months at our printer's with twelve monotype keyboard operators working around the clock seven days a week. You will note that great strides have been made in going from an eighteen-month schedule in producing Volume 50 to an 8.5 month schedule for Volume 53. We wish to assure all users that the CA indexes are being produced just as rapidly as it is humanly possible to do so.

The most critical factor causing this backlog in indexing was the difficulty in obtain-

ing and training chemists who were interested and qualified to undertake work of this nature in a period when there have been serious shortages of chemists. Our staff has had to expand more than two-fold in a period of four years so that we now have 156 people involved in this subject and formula index work.

The indefiniteness of many subjects means that a true subject index is not casually or automatically made, but must be more a product of insight, understanding, and judgment, all of which add to the requirements of training, experience, and careful application.

Our other indexes, the Author and Numerical Patent, regularly appear on schedule, so I do not believe that they are an object of discussion.

The suggestion of Dr. F. L. Taylor, to which Miss Coleman refers, that the abstracts be numbered so that indexing would not have to wait for page proof has merit. Numbering of abstracts sequentially, of course, will not help us at this time while there is a backlog of indexing to be done. When we are caught up to date, the numbering of abstracts would help us by two weeks while the manuscript is out to the printer. The organic indexing is largely done now from the original papers so that this work can go forward while page proof is being prepared. All these points have been under careful study for several years as we must change some procedures, especially when we publish subject and formula indexes in the individual issues or on a monthly basis as "interim indexes." The ACS Board of Directors has asked us to produce "interim indexes" as soon as possible, but we cannot do so at this time without seriously interfering with our catch-up program on the annual indexes.

Miss Coleman also states "that detailed informative abstracts of papers from ACS publications be omitted." CA, of course, has taken great pains to provide a complete record of the world's new chemical literature. To omit informative abstracts from the ACS journals (or any others) would seriously interfere with the acceptance of CA here and abroad as a complete reference work. It means that users would have to look in numerous different files of journals when complete retrospective searches are undertaken. The abstracts provide an excellent "point of reference" to tell a user whether a further search of the original is desired. The indexes cannot do this alone. A comparison of the distribution lists of J. Am. Chem. Soc. and CA shows that many thousands of subscribers do not receive both. We certainly do not want to penalize any users by providing an incomplete service. It has been our purpose to make this information widely available and useful to the greatest number of chemists. A

recent survey of nearly 100 organic chemists all over the world showed that an overwhelming majority approves of the present form of abstracts or organic papers. Shortening the abstracts further from "more available" journals will require greater sacrifice of editorial time in addition to the attendant loss of utility. This problem will be studied carefully in the future. Any feasible changes which benefit the greatest number of users will be made.

The continued good interest, suggestions, and support of users, libraries, and members will be deeply appreciated.

* * *

MISCELLANEOUS MAIL

Roberta Andrews, Business Manager, Union List of Scientific and Technical Periodicals of Greater Cincinnati and Vicinity.

We wish to give the publication wide publicity and would appreciate it very much if the following announcement could be printed in your current issues:

Available is a new Union List of Scientific and Technical Periodicals of the Libraries of Greater Cincinnati and Vicinity, sponsored by the Cincinnati Chapter of Special Libraries Association, compiled and edited by Gertrude Bloomer, assisted by Dottie F. Brofft and Irene Campbell. It covers the holdings of 35 libraries to January 1958. Orders for copies of the list should be sent to Roberta Andrews, U. S. Public Health Service, Occupational Health Field Hdqts., 1014 Broadway, Cincinnati 2, Ohio. Cost per copy \$10.00.

* * *

Mrs. Margaret Clark, Publicity Director, Advertising Division.

Would it be possible for you to do a "good turn" for those of us in the Advertising Division who are responsible for the success of our Division's project, the publication of WHAT'S NEW IN ADVERTISING AND MARKETING?

The cost is just \$3.50 to SLA members \$5.00 to others) for 10 fine issues. Check payable to: Advertising Division, Special Libraries Association. Mail to: Mrs. Elizabeth M. Hutchins, Young and Rubicam, Inc., 285 Madison Avenue, New York 17, New York.

ED. NOTE: The sample copy of vol. 25, no. 8 was divided into three sections: an announcement of forthcoming publications pertinent to the advertising field, a special report, and a classified arrangement of recent books, pamphlets, and brochures. If you need a source of information about market surveys, glossaries, selling and advertising, you should consider this SLA Advertising Division publication.

(Continued on Page 102)

SCIENCE-TECHNOLOGY SERIALS

Compiled by
ANDREW S. GLICK



ANALYTICAL BIOCHEMISTRY

V.1, no.1, Jan.-Feb. 1960, bimonthly, \$15.00 per vol.

Will serve as a central international source of information on new and improved methods in the various fields of biochemistry, biophysics, and related areas of experimental biology. Includes papers on qualitative and quantitative techniques based on chemical, physical and biological principles.

BOOKS TO COME

V.1, no.1, February 1960, bimonthly, \$7.50. R.R. Bowker & Co., New York, N.Y.

Formerly called BOWKER'S ADVANCE REFERENCE-SOURCE REPORTING SERVICE.

Contains material gathered for the Announcement issues of LIBRARY JOURNAL. Readers will be able to locate new books by author, title, subject and month of publication. A complete author-title index will be in every issue.

BRITISH POWER ENGINEERING

V.1, no.1, June 1960, monthly, \$7.50.

To serve men of managerial and executive status in this field, the users of all forces of power in industry and those responsible for the manufacture, design, and development of power installations and equipment. Will contain technical articles by recognized authorities analyses of future trends, expert appraisal of current developments, research reports, and statistical surveys.

COPPER ABSTRACTS

V.1, no.1, March 1960, monthly, free. Copper Development Association, London W. 1, England

A new publication, issued monthly, containing selected abstracts of recent literature on copper and copper alloys. The abstracts are based on a survey of more than 120 technical and other periodicals and of such relevant books, etc. as appear from time to time. An index is provided in the December issue.

CRYOGENICS (BRITISH)

V.1, no.1, September 1960, quarterly \$15.00. International journal devoted to the publication of original work in the field of cryogenic engineering and research. Will contain original papers in English with abstracts in English, French, German and Russian.

ELECTROCHEMICA ACTA

V.1, no.1, April 1959, bimonthly, \$40.00.

An international journal of pure and applied electrochemistry published under the auspices of the International Committee for Electrochemical Thermodynamics and Kinetics.

Of special interest to workers in the field of chemical physics, industrial electrolysis, electromachining, and corrosion.

GAS TURBINE MAGAZINE

V.1, no.1, Jan.-Feb. 1960, bimonthly, \$3.00. Devoted to the interests of design, application and operation engineers in the field of gas turbine manufacture as well as the many fields of commercial and governmental usage. Will carry news, technical developments, and bibliographies of gas turbine papers.

GLASS AND CERAMICS

V.1-3, March-June 1960, quarterly \$80.00 Consultants Bureau, New York, N.Y.

This Soviet journal published for glass and ceramics researchers, technologists and production workers provides Western scientists with reports on the latest technical advances from the laboratories and refractories of the USSR.

The 1957 issues will appear in 3 volumes each containing 4 issues available in 1960 as stated above. The 1958 and 1959 issues will be published in four-issue volumes on a bimonthly basis.

GRAPHIC SCIENCE

V.1, no.1, October 1959, monthly, \$8.00.

Magazine of engineering drawing management and teaching of engineering drawing. Concerned with the technology of drawing and reproduction techniques used in industry. Emphasis is placed on drafting department and personnel management, training of draftsmen and drawing standards.

INDEX CHEMICUS

V.1, no.1, Feb. 1960, monthly, \$250.00 to Educational Institutions, \$500.00 to Industrial Organizations. Eugene Garfield Associates, Philadelphia, Pennsylvania.

Index to 50,000 new chemicals reported annually in the science literature. Complete bibliographic information will be given and will contain listings of chemical names, structural diagrams and molecular formulas. Index will be cumulated monthly, quarterly and yearly.

INTERNATIONAL CHEMICAL DEVELOPMENTS

V.1, no.1, April 1960, bimonthly, \$18.00.

Designed to advise American executives in the chemical and allied industries of opportunities for investment, exporting and licensing abroad.

JOURNAL OF ELECTROANALYTICAL CHEMISTRY (NETHERLANDS)

V.1, no.1, August-September 1959, bi-monthly, 1959, \$17.50.

International journal dealing with all the aspects of electroanalytical chemistry including fundamental electrochemistry.

JOURNAL OF NUCLEAR ENERGY

This publication has been further divided from 2 to 3 parts.

In addition to Part A REACTOR SCIENCE, 3 vols.

(Continued on Page 102)

DOCUMENTATION DIGEST

Compiled by Chemistry Section Members

LESLIE B. POLAND, Editor



CONTRIBUTORS

ARB Ann R. Bergen, University of Wisconsin Library; MB Marguerite Bebbington, International Nickel Company, Inc.; REB R. E. Burton, Union Carbide Metals Company; BC Bertha Chance, Emery Industries, Inc.; AMC Anna M. Coleman, Dow Corning Corporation; RJH Robert J. Havlik, Linde Company; DTH Don T. Ho, Minnesota Mining and Manufacturing Co.; JH Janet Hollander, Dixie Cup of American Can Co.

HI Hazel Izzo, Stromberg-Carlson Co.; SK Stella Keenan, H. W. Wilson Co.; SJK Stephen J. Kees, Ontario Paper Co.; MEM Mary E. Mitchell, E. I. du Pont de Nemours & Company; VM Vittoria Mondolfo, University of Chicago Library; MM Marguerite Moran, Metal & Thermit Corporation; AVN Alive V. Neil, General Electric Company; HO Harold Oatfield, Charles Pfizer and Co.; MCP M. Constance Parche, Carborundum Company.

DBS Dorothy B. Skau, U. S. D. A. Southern Research Lab.; PS Patricia Snyder, Owens-Illinois Glass Company; RLS Richard L. Snyder, Massachusetts Institute of Technology Science Library; MES Mira E. Spinning, Bristol Laboratories Inc.; EBS (Miss) E. B. Streeter, Wallerstein Company; MT Maria Tashima, Shell Development Company; RJT R. J. Trischler, IBM Data Systems Division, Product Development Laboratory; BBW Blanche B. White, W. R. Grace & Company.

ABSTRACTING AND INDEXING

186. Concerning abstracts.

E. J. Gauss. IRE TRANS. ELECTRONIC COMPUTERS. EC-9(1):125 Mar. 1960. (letter to editor.)

Considers the content of a technical abstract; suggests that the abstract should contain statements of the method and of the result. —RJT

187. New indexing pattern for Nuclear Science Abstracts.

M. S. Day and I. Lebow. AM. DOCUMENT. 11(2):120-127 Apr. 1960.

Detailed description of the mechanized techniques now being used by the Technical Information Service of the A.E.C. in the preparation of the several indexes for Nuclear Science Abstracts. —MEM

188. Report on the new Index Medicus.

F. L. Beckwith. SLA WISCONSIN CHAP. BULL. 29(4):9-10 Apr.-June 1960.

Mechanized indexing as applied to one specific literature field is described, as used since Jan. 1960. —SK

189. Scientific abstracting and indexing services.

R. G. Rice, C. L. Bernier and D. B. Baker. STWP REVIEW 7(3):11-15 July 1960.

The terms abstracting and indexing are defined as they apply to the scientific field. Types of abstracts, importance of indexing, types and growth of established services, work of the National Federation of Science Abstracting and Indexing Services (NFSAIS), possible future developments and the need for international cooperation to accomplish a satisfactory and comprehensive coverage of the world's technical literature are discussed. 12 references. —MB

190. Ten years of "Library Science Abstracts".

H. A. Whatley. LIB. ASSN. REC. 62 (5):143-145, May 1960.

A review by their editor.

—SJK

BIBLIOGRAPHY

191. Making the Encyclopaedia Britannica. John Armitage. LIB. ASSN. REC. 62 (5):146-149, May 1960.

The London editor of the Encyclopaedia Britannica describes the system adopted for keeping as nearly up to date as possible. —SJK

192. New directions in Soviet planned bibliography.

T. S. Whitby. COLL. & RES. LIB. 21 (1):9-12 Jan. 1960.

Reviews topics of the Moscow conference on bibliography held Feb. 9-12, 1959 under areas considered: current, retrospective, selected bibliography; bibliography of bibliography and bibliobibliography. Formation of Council on Library Problems (Soviet po voprosam biblioteknoy raboty) described. —DBS

193. Signposts: some selections from the 1959 special library literature.

G. M. Paterson. ASLIB PROC. 12(6): 229-241, June 1960.

Review of the pertinent literature with extensive bibliography. —MT

BOOK TRADE

194. The coming of the compact book.

W. D. Boutwell. LIB. J. 85(10):1859-1862 May 15, 1960.

For adults and college students the paperback has come of age. For teachers, librarians, and even principals the paperback is a new frontier. —EBS

195. Cost indexes for U. S. periodicals: a progress report.

H. M. Welch. LIB. RESOURCES & TECH. SERV. 4(2):150-157 Spring 1960.

Cost indexes were prepared for the last ten years for

3000 periodicals. The greatest increase has been in the field of chemistry and physics which are also the most expensive. —MT

196. Cost of scientific periodical publications.

NATURE 186(4719):124. Apr. 9, 1960.
A table of periodicals which are comparable in that none has many advertisements and they are similar in matter per page. They are arranged in order of price per page. It is believed that a reduction in cost leads to increased circulation of scientific journals. —RJH

197. The future of paperbacks.

F. L. Schick. LIB.J. 85(10):1863-1865 May 15, 1960.
The variety of paperback titles will further increase, particularly in the non-fiction field. —EBS

198. International communications and scientific journals.

NATURE 186(4722):358 Apr. 30, 1960.
Comment on the difficulties in the increasing number of editors in countries overseas who are preparing copies of their journals translated into English. Suggested solutions are reviews by English speaking men before publication or printing in Interlingua or Esperanto. —RJH

199. The paper-back: its past, present and future.

D. Flower. LIB. ASSN. REC. 62(5):175-184 May 1960.
A British publisher traces the development of the paper-back in Britain and the United States. —SJK

200. The problem of language in publications of works in science and other fields of learning.

D. Keilin. NATURE 186(4728):412 June 11, 1960.

Comments on the prevalent use of the English language in publications in scientific and other fields of learning based on David Hume's comments to Gibbon in 1767, concerning the prevalent use of French at the time. —RJH

201. U. S. Senate consents to ratification of Florence agreement.

V. W. Clapp. ALA BULL. 54(5):377-378 May, 1960.

The effect of the agreement is to remove the obstacles to the importation of books and a wide variety of other scientific, educational and cultural materials by eliminating or reducing tariffs or other trade barriers. Reasons for ALA's support of ratification are given. —ARB

202. Why don't they prepare better technical catalogs?

W. K. Hollis. PROD. ENG. 31(22):52-53 May 30, 1960.

A list of complaints about the make-up of trade catalogs and suggestions for improvement. —RJH

CATALOGING AND CLASSIFICATION

203. Cataloging ephemera.

E. Lenel. LIB. RESOURCES & TECH. SERV. 4(2):128-130 Spring 1960.

Ephemeral pamphlets and vertical file material are cataloged at New York University Library by subject card with location entries rather than the standard author entry. —MT

204. Cataloging-in-source.

Anon. LIB.J. 85(8):1535-1537 Apr. 15, 1960.

Comments on "The cataloging-in-source experiment: a report to the Librarian of Congress . . ." LC concludes that "neither a full nor a partial program desirable" and that the Bowker programs provide the best, most economical, alternatives. —EBS

205. Coordinated cataloging.

R. E. Kingery. LIB.J. 85(11):2106-2109 June 1, 1960.

A discussion of some present applications and future developments of available alternatives to "cataloging-in-source". —EBS

206. The Decimal Classification, Edition 16: Class 300.

E. J. Coates. LIB. ASSN. REC. 62(3):84-90 Mar. 1960.

A critical review by the Chief Subject Cataloguer, British National Bibliography. —SJK

207. Hierarchical definition.

P. A. Richmond. AM DOCUMENT. 11(2):91-96 Apr. 1960.

Considers the relation of hierarchical definition to hierarchical classification, coding for machine literature searching, and alphabetical indexing. This is one of the essential features of contemporary information retrieval systems based upon the subject analysis of knowledge. —MEM

208. Merits and demerits of various classification schemes for the social sciences.

B. Kyle. UNESCO BULL. LIB. 14(2):54-60 Mar.-Apr. 1960.

The following classification schemes are compared: Dewey, UDC, LC, Bliss, Colon, Human Relations Area Files and a new scheme drafted by the author and sponsored by the International Committee for Social Sciences Documentation. —DTH

209. Progress in revision of the UDC 621.3 tables.

G. N. J. Beck. ASLIB PROC. 12(3):109-114 Mar. 1960.

Revisions for the UDC electrical engineering sections are given. —MT

210. Some aspects of basic research in classification.

P. A. Richmond. LIB. RESOURCES & TECH. SERV. 4(2):139-149 Spring 1960.

Developments in traditional, faceted and the more recent subject approach (i.e., uniterms, semantic factoring, etc.) to classification are discussed. —MT

DOCUMENTARY REPRODUCTION

211. Copy camera rolls to the job.

PROD. ENG. 31(28):72 June 11, 1960.

Diagrams and photographs on the new Peerless Photo Products "Copy Cart." Copies are automatically developed and stabilized inside same cart — no need for an outside water source. —RJH

212. Development in copying methods — 1959.

G. F. Sheperd, Jr. LIB. RESOURCES & TECH. SERV. 4(2):116-125 Spring 1960.

A review of the literature. —MT

- 213. A directory of microfilm services.**
IND. PHOT. 9(4, Sect. 2):27-29, 39, 48
Apr. 1960.

Lists alphabetically by states the names of companies offering a variety of microfilm services. —MEM

- 214. Document micro-reproduction.**
NATURE 186(4725):602 May 21, 1960.

A review of the book, "Microtexts as a media for reproduction," which is a collection of papers presented in a symposium at Hatfield Technical College (England) in November 1959. —RJH

- 215. How the graphic arts can help engineering communication.**

A. N. Spence. IRE TRANS. ENG. WRITING & SPEECH. EWS-3(1):16-19
Apr. 1960.

New methods of printing and publishing used by the Dept. of the Navy are described. Developments such as the Videograph printing process, a completely automatic printing press, computer printout typography, and the use of card and camera systems for information storage and retrieval systems, are explained. —RJT

- 216. Hurdles for microfilm: economics, technology, technique and words.**

V. Tate. PHOTO METHODS FOR INDUSTRY 3(4):82,84 Apr. 1960.

Presents a brief summary of the history of microfilm and discusses two glossaries in the field of micro-reproduction. —MEM

- 217. Microfilm standards: small print looms large for writer and user.**

V. Tate. PHOTO METHODS FOR INDUSTRY 3(5):62-63 May 1960.

Discusses the standards of the American Standards Association which are related to microfilm. Also discuss the work of the Department of Defense aimed at establishing a "Military Standard" for procurement of microreproduction services in several fields. —MEM

- 218. National Microfilm Association's ninth convention is its largest.**

V. Tate. PHOTO METHOD FOR INDUSTRY 3(6):58-59,62 June 1960.

Discusses exhibits and some of the papers presented at the convention. One session was devoted to micro-reproduction for library, archival and scholarly purposes. Papers will be published in the annual Proceedings. —MEM

- 219. Office copying processes.**

H. Denstman and M. Schultz. IND. PHOT. 9(6):8-9, 63 June 1960.

Discusses the six different copying processes which can be used to reproduce originals: photo-copying, Verifax, facsimile, Xerography, diazo and thermography. Compares them for speed, cost, use, etc. —MEM

- 220. Photoduplication in libraries.**

James E. Skipper, issue editor. LIB. TRENDS 8(3): entire issue Jan. 1960.

Contributed articles discuss: history of microfilm activity; microforms as library resources; state of microtext publications; bibliographical control of microforms; organization of microforms in the library; copying methods as applied to library operations; policy questions related to library photoduplication laboratories; photocopying by libraries and copyright: a

precis; microfilm as used in reproduction and transmission systems; advance and goals in microphotography. —PS

DOCUMENTATION — GENERAL

- 221. Alternatives to the scientific periodical: a report and bibliography.**

R. H. Phelps and J. P. Herlin, UNSECO BULL. LIB. 14(2):61-75 Mar.-Apr. 1960.

A well-documented discussion on the deficiencies of the scientific periodical as a means of communicating scientific information, the pros and cons of the alternative suggestions and arguments in defense of the periodical. 121 references. —DTH

- 222. American Documentation Institute meeting.**

P. A. Richmond. COLL. & RES. LIB. 21(2):156-157 Mar. 1960.

Report on the Oct. 22-24, 1959 meeting at Lehigh University, Bethlehem, Pa. Theme: round-up of documentation experience in small collections — 50,000 documents or less. —DBS

- 223. Background to scientific communication.**

M. M. Kessler. IRE TRANS. ENG. WRITING & SPEECH. EWS-3(1):3-6
Apr. 1960.

Discusses the need for a total communication system to serve all groups of the scientific community. Suggests the establishment of a center for research in scientific communication, to explore four major areas: (1) machine components and devices; (2) the bounds of scientific and engineering communication; (3) coding and indexing; and (4) system analysis. —RJT

- 224. The chemical library of Thomas Jefferson.**

H. J. Abrahams, J. CHEM. ED. 37(7): 357-360 July 1960.

Thomas Jefferson's interest in chemistry is indicated by the thirty chemistry books in his original collection and which are now in the Library of Congress. A bibliography is given together with notes on their acquisition, on his acquaintance with the authors and his views of their value. —MCP

- 225. Data processing center unveiled at Texas A & M College.**

OIL MILL GAZETEER 65(1):23-24 July 1960.

Administered through the Texas Engineering Experiment Station, a part of the A & M system, this Center offers facilities to all of the colleges and universities of the South, without cost, for non-sponsored academic research, and on a reasonable fee basis for sponsored research. Robert L. Smith is Data Processing Center Head. —DBS

- 226. A dictionary of documentation terms.**

F. S. Wagner, Jr. AM DOCUMENT. 11(2):102-119 Apr. 1960.

Compilation of the terms used in the jargon of documentation. —MEM

- 227. How many more new journals.**

NATURE 186(4718):18 Apr. 12, 1960.

A recent meeting by the Scientific Publications Council (Great Britain) discussed the problem of, and reasons for, the increase in new scientific journals. One estimate is that scientific publications increase about 5-10 per cent per year. Several solutions are suggested. Con-

clusion is that a revolution in the means of communicating scientific knowledge seems inevitable. —RJH

228. International standardization in documentation: results and future prospects.

B. Dezsenyi. UNESCO BULL. LIB. 14 (2):49-53 Mar.-Apr. 1960.

The functions of the International Organization for Standardization (ISO) are described. Of particular interest are the work and future plans of the ISO Technical committee — Documentation, which includes such items as: code for abbreviation of titles of periodicals, systems for transliteration of Modern Greek, Hebrew, Classical Arabic and cyrillic characters, and recommendations for the standardization of bibliographic references. —DTH

229. Librarians vital to market research.
CHEM. ENG. NEWS 38(19):30-31 May 9, 1960.

Report on Symposium on Sources of Information for Market Research, the Chemist's Club Library, New York. S. Arasin, Jr.: The librarian functions by supplying (1) sources of technical background information, (2) lists of companies which use the product under study, (3) government statistics, and (4) lists of associations to be visited. W. W. Flexner: International chemical market information is to be found in the following UN publications: Statistical Yearbook, Bulletin of Statistics, Commodity Trade Statistics, and Yearbook of International Trade Statistics. —AMC

230. Logan.
J. C. Brown. SCI. AMERICAN 202(6): 53-63, 204 June 1960.

An artificial language to test the thesis that the structure of language determines the forms of thought, employs audiovisual isomorphism which should permit correct mechanical recording and reproduction of spoken and written forms. —MB

231. Microfilm of patent classification class lists.

J. PATENT OFFICE SOC. 42(3):215-6 Mar. 1960.

Microfilm copies are available of the official record of the comprehensive listing of nearly 3,000,000 U. S. patents issued through September 1959, arranged numerically in class and subclass order according to the Patent Office Classification. —BC

232. "The state of the library art".
R. R. Shaw. LIB.J. 85(7):1337-1339 Apr. 1, 1960.

The Graduate School of Library Service at Rutgers has announced an ambitious project — a new series of books intended to provide an encyclopedic review of knowledge in the field of librarianship. This paper explains how the project evolved and presents a picture of the planning of the work as a whole. —EBS

233. We don't need relaters.
W. H. Shearon, Jr. IND. ENG. CHEM. 52(3):189 Mar. 1960. (editorial.)

Response to address of T. K. Glennan, NASA, before the AAAS, suggesting a need for scientists called "relaters", who would devote themselves to interrelating the work of all others.

A man's best relater is himself. "We have watched with growing concern the predigested reading prepared by librarians and technical editors." —AMC

234. World's technical journals will carry 60 million pages of scientific reports during 1960.

CHEM. ENG. NEWS 38(25):47 June 20, 1960.

Forecast by J. P. Nash of Lockheed. About 50% of the papers will be in English, 16% in Russian, 12% in German, and 10% in Japanese. The papers will represent only a small part of the "noteworthy scientific developments", because the work is outstripping the capacity of the journals, and because hundreds of thousands of classified or propriety contract reports cannot be published. —AMC

DOCUMENTATION RESEARCH

235. Mathematical evaluation of the scientific serial.

L. M. Raisig. Science 131(3411):1417-1419 May 13, 1960.

A citation-count method is presented which can be used to measure qualitatively the value of scientific serials. The method is based on the relationship between number of articles quoted to number of articles published by each serial per period, and provides new criteria for selecting periodicals, as well as a revaluation of lists of serials. —VM

INFORMATION STORAGE AND RETRIEVAL

236. Application of special punched card system to coordinated clinical statistics of malignant tumors of the female genitalia.

H. Hosemann and J. Haller. AM DOCUMENT. 11(2):170-172 Apr. 1960.

A continuous record of all control examinations after the first treatment provides for more rapid coordination of information on the therapeutical results on a national and international scale. —MEM

237. ASQC has its code.

R. S. Bingham, Jr. CHEM. ENG. PROGR. 56(6):29 June, 1960. (letter to editor)

The American Society for Quality Control has prepared a master code for papers in its field, and now lists all its papers with the appropriate code. —AMC

238. Automated solution answers fast-braille problem.

PROD. ENG. 31(15):15 Apr. 11, 1960.

Description of a Braille writer, automated by punched tape. System was developed by Systematics, Inc., Hermos Beach, Calif. A suggested advantage is the possibility of an International Data Processing Center using Braille as a common code. The center would act as a decoder translating into the desired language. —RJH

239. Automation of ASTIA: a preliminary report.

W. A. Barden, W. Hammond and J. H. Heald. Dec. 1959, 55p. AD-227,000 (PB 161,306), order from OTS, \$1.25; thru U. S. Gov. Research Repts. 33(3): 330(1960).

The three stages by which the automatic data processing system will be put into operation are examined. Also, the process of compiling mechanized cumulative indexes to the Technical Abstract Bulletin is presented. —BC

240. Automation in documentation.

F. H. Plankeel. AM DOCUMENT. 11 (2):128-134 Apr. 1960.

Description of a mechanized and automated coordinate index system which uses punched tape and film instead of term cards. —MEM

241. The Bendix G-20 data processing system.

D. C. Evans and C. A. Piper. DATAMATION 6(2):14-17 Mar.-Apr. 1960.

This new computer has a high-speed central processor, matched input-output units, magnetic tape, high speed printer and operates in a common language which is made up of 10-bit characters. —AVN

242. Classification not the answer.

E. J. Crane. CHEM. ENG. PROGR. 56 (14):26,28 June 1960. (letter to editor commenting on letters by Lauer and Morse; see below for these abstracts)

The total content of articles cannot effectively be designated by code numbers, and scientific subject-matter changes too rapidly to make a universal code workable. Indexing is better done by a group of expert indexers than by thousands of scattered, inexperienced authors. Classification is an inappropriate method, and too much reliance upon classification tends to destroy the effectiveness of an index. —AMC

243. Closing the gap in chemical documentation.

G. M. Dyson. CHEM. ENG. NEWS 38 (19):70-72,74 May 9, 1960.

CHEMICAL ABSTRACTS is building a punched-card file of known chemical structures, starting with organofluorine compounds. Besides serving as an indexing tool, it will provide bibliographies. Similarly, "concept files" are contemplated which will index physical properties, chemical reactions, and applications. A RESTRICTED EXPRESS LIST FOR PHARMACOLOGICALLY ACTIVE SUBSTANCES is contemplated. —AMC

244. Coded articles?

B. E. Lauer. CHEM. ENG. PROGR. 56 (4):26,28 Apr. 1960. (letter to editor)

If once a universal master code were established and published, authors could be required to code the subject matter of their papers as part of the publication. Literature searches would be entirely mechanical, requiring no knowledge of the subject matter. —AMC

245. Computers that hear and obey.

BUSINESS WEEK, No. 1607:119 June 18, 1960.

An attempt is being made to produce machines that understand human speech. The key to the problem may be in distinguishing resonances of vowel sounds. —AVN

246. Documentation kits for sale.

H. N. Staats. CHEM. ENG. PROGR. 56 (6):28-29 June 1960. (letter to editor)

For the past five years Facsi Inc. has been supplying a documentation kit to members of the Society for Nondestructive Testing which supplements their six-issue-per-year journal and microfilm service. The Society markets the kit and receives a commission. Each kit comprises a documentation system ready to go with all cards coded and prepunched. Encoded blank cards are available so that a user can enter his own data in the system. —AMC

247. Experience in the use of the unit concept co-ordinate indexing applied to technical reports.

A. Johnson. J. DOCUMENT. 15(3):146-155 Sept. 1959.

History and experience of the use of unit concept co-ordinate indexing to retrieve information in technical reports at the British Insulated Callender's Cables Limited. —RJH

248. Exploitation of recorded information.

I. Development of an operational machine searching service for the literature of metallurgy and allied subjects.

A. Kent. AM. DOCUMENT. 11(2):173-188 Apr. 1960.

Describes the background, plans, initial stages, and problems of the new mechanized searching in metallurgy and allied fields offered by the American Society for Metals. —MEM

249. International conference for standards on a common language for machine searching and translation.

R. E. Maizell. COLL. & RES. LIB. 21 (2):125-126 Mar. 1960.

Sponsored jointly by Western Reserve University and Rand Development Corp., this seven-day meeting brought together leading information processing systems specialists and designers from all over the world. Proceedings slated for publication as a book by Interscience Publishers —DBS

250. Machine developed that can read in much the same way as a person.

BUSINESS WEEK, No. 1608: 162 June 1960.

The Mark I perceptron developed by Cornell Aeronautical Laboratory has been publicly demonstrated. Its design consists basically of a "sensory unit", "association units" and "response units" and closely resembles the concept of the human recognition system. —AVN

251. The MARLIS (multi-aspect relevance linkage information system).

B. C. Vickey. AM. DOCUMENT. 11(2): 97-101 Apr. 1960.

Discusses the ways in which MARLIS has strengthened the linkage between the content of a document, or collection of documents, and the question in the mind of the searcher. —MEM

252. Mathematical analysis of various superimposed coding methods.

S. Stiassny. AM. DOCUMENT. 11(2): 155-169 Apr. 1960.

Describes and analyzes the chain-spelling, random-number and staggered superimposed coding method. —MEM

253. Microfilm to cut red tape for Air Force contractors.

PROD. ENG. 31(11):15 Mar. 1960.

A description of the Micro-mechanized Engineering Data for Automated Logistics (MEDAL) system which is being administered by Air Materiel Command, Wright-Patterson AFB. The system requires contractors to submit engineering drawings on 35mm microfilm which are mounted in aperture cards and indexed. —RJH

254. Monroe enters small machine arena.
DATAMATION 6(2):58 Mar.-Apr. 1960.

The Monrobot XI has the following features: 1. simultaneous (one-instruction) output on different units; 2. wide range I/O equipment; 3. low price; and, 4. powerful instructions. —AVN

255. Packard Bell announces PB-250.
Max Palevsky. DATAMATION 6(2):52-53 Mar.-Apr. 1960.

This is the first commercial computer to be completely modularized. It is a desk size machine performing up to 40,000 operations per second and selling for a comparatively low price of \$30,000. —AVN

256. Pro: literature scientist.
R. G. Rowe. CHEM. ENG. 67(12):271 June 13, 1960. (letter to editor)

There is a place for machine retrieval, but the key man must still be the engineer or scientist who can separate the drivel from the facts. Overemphasis on machine retrieval delays progress. Lack of an adequate program of technical fact dissemination will stunt U. S. technical progress and waste millions of R and D dollars. —AMC

257. Punched cards in the library and information fields.
J. Davis. ASLIB. PROC. 12(3):101-108 Mar. 1960.

The use of punched cards for information storage and retrieval and in technical services are summarized. —MT

258. RPC quickens pace; 9000 announced.
DAMATION 6(2):23 Mar.-Apr. 1960.

A new modular electronic data processing system from Royal McBee. It includes central processing and continuous magnetic tape file for storage. Information can be fed in from punched tape, punched cards, or through a typewriter. —AVN

259. Soviet computer technology — 1959.
W. H. Ware, ed. IRE TRANS. ELECTRONIC COMPUTERS, EC-9(1):72-120 Mar. 1960. (Note: see Machine translation and information retrieval Application, p. 98-100.)

Presents history, progress, and current equipment used in Soviet mechanized language translation, auto-abstracting, and information retrieval. —RJT

260. What's available for storage of digital information.
W. S. Knowles. PROD. ENG. 31(25):68-71 June 20, 1960.

A good review of the various types of storage of digital information comparing each type as to speed, reliability, storage capacity, etc. Data for 12 systems are presented in tabular form. —RJH

261. Work's in progress.
R. D. Morse. CHEM. ENG. PROGR. 56(4):28,30 Apr. 1960. (letter to editor)

A subcommittee of the A.I.Ch.E. Standards Committee concluded that the most urgent need in the field of documentation of chemical engineering is a thesaurus giving the preferred technical terms and their synonyms and related terms. The subcommittee is making a study of the information systems in use at du Pont. —AMC

LIBRARY ADMINISTRATION

262. Canada's National Library—a progress report.

W. K. Lamb. ALA BULL. 54(4):287-292 Apr. 1960.

This report outlines the steps taken in the organization of the National Library, what has been done since its inception and its hopes for the future. The first step has been chiefly bibliographic: a bibliographic center, union catalog, national bibliography; the proposed second step: a new building and expansion of book collection and services. —ARB

263. Expansion of library service in the USSR.

V. Fediai. ALA BULL. 54(5):379-381 May, 1960.

The Central Committee of the USSR Communist Party has issued a comprehensive order for expansion, reorganization and increase in financial support for library services. A summary is given of an article entitled, "Methods and Means of Improving Library Services in the Country," which appeared in the October 1959 issue of PARTY LIFE, giving the details of this order and a summary of the discussion on which it was based. —ARB

264. New York State's pioneer library; a federated library system in action.

H. S. Hacker et al. WILSON LIB. BULL. 34(5): 345-50,354-6 Jan. 1960.

Article outlines in some detail the organization and program of a federated system, serving a metropolitan county and two rural counties. Covers duties of the system board and describes services to the public. Benefits to member libraries are summarized along with comments on the central library. —PS

265. The plan's the thing.
WILSON LIB. BULL. 34(9): 657 May 1960.

Brief summary of Part II of the Ohio State Library's 1959 annual report subtitled A PROPOSAL FOR EXTENDING LIBRARY SERVICE IN OHIO. Introduces scheme intended "to extend library service to all residents of the state and to make fullest use of the existing library facilities." —PS

266. The supervisor: responsibilities and qualities.

F. Henselman. LIB.J. 85(7):1329-1333 Apr. 1, 1960.

Lists and discusses the most important managerial functions of a supervisor. —EBS

267. Two ARL approaches to counting holdings of research libraries.

A. F. Kuhlman. COLL. & RES. LIB. 21(3): 207-211 May 1960.

Based primarily on the action of the Association of Research Libraries as reported in the minutes of its meetings (1944-60). Methods discussed are physical volume count and bibliographical unit count. —DBS

268. We chose microfilm.

F. L. Meals and W. T. Johnson. COLL. & RES. LIB. 21(3):223-226, 228 May 1960.

Colby Junior College and Abraham Baldwin College file microfilm copies of some periodicals instead of binding original journals. Of particular interest are figures comparing cost and floor space required for storage of bound and microfilmed periodicals, and table showing comparison of binding and microfilm costs. —DBS

LIBRARY EDUCATION & TRAINING

- 269. Aspects of training.**
W. L. French. LIB.J. 85(7):1334-1336
Apr. 1, 1960.

Comments by a business personnel expert and consultant to industry. —EBS

- 270. Canadian library education and certification.**
Rev. E. E. Desroches, S. J. ALA BULL.
54(4):310-312 Apr. 1960.

A discussion of the development of the Canadian library school, degrees offered, current problems in library education, and national and regional standards for library certification. —ARB

- 271. Library education and professional competence.**
W. J. Plumbe. LIB.J. 85(9):1739-1742
May 1, 1960.

Factors that determine competence: personal qualities, practical experience and standard of general education. Librarianship demands a wide subject background in its practitioners. —EBS

- 272. The school of experience.**
V. W. Clapp. LIB.J. 85(9):1748-1750
May 1, 1960.

I would not exchange direct experience for all the graduate study in the world — but I wish I had had the graduate study in addition. "I would never give a specialist any final authority in specifically library matters." —EBS

- 273. Theory and technique in library education.**
J. H. Shera. LIB.J. 85(9):1736-1739 May
1, 1960.

"The development of the intellect must go hand-in-hand with a thorough training that has authentic practical ends." —EBS

- 274. What is RIGHT with library education.**
L. Shores. LIB.J. 85(9):1742-1744 May
1, 1960.

An increasing number of doctorates on library school faculties and a demonstration of competence in academic areas as well as in library science are important gains. —EBS

PROFESSIONAL ASSOCIATIONS AND SOCIETIES

- 275. The Canadian and the American library associations.**
E. H. Morton. ALA BULL. 54(4): 282-
285 Apr. 1960.

Discusses the establishment of the Canadian Library Association, its current projects and aims and how it compares and contrasts with ALA. —ARB

- 276. FALANA — a new association.**
V. Richards. LIB.J. 85(9):1751 May 1,
1960.

In an effort to consolidate their views on library education, British librarians working in Canada and the United States have formed the group named Fellows and Associates of the Library Association in North America. —EBS

- 277. The International Association of Agricultural Librarians and Documentalists.**

F. E. Mohrhardt. STECHERT-HAFNER
BK. NEWS 14(8):89-91 Apr. 1960.

Reviews briefly the first 5 years of the organization: its objectives, accomplishments, and contributions to the development of librarianship and documentation. —EBS

- 278. The Royal Society and its foreign relations.**
E. N. da C. Andrade and D. C. Martin.
Endeavour 19(74): 72-80 Apr. 1960.

The tercentenary of the Royal Society's founding falls in July 1960. Its cooperation with and contribution to international scientific programs and personnel is traced from the first list of Fellows (1663) which included Huygens and Sorbiere, to the recent work with the International Geophysical Year. —MCP

- 279. The status of the librarian according to accrediting standards of regional and professional associations.**
F. Veit. COLL. & RES. LIB 21(2):127-
135 Mar. 1960.

Textual presentation supplemented by two tables. I recapitulates the personnel provisions governing accreditation by the six regional associations. It notes personnel standards and practices applied by the twenty-one professional associations, including indication of the place the professional school library is assigned within the college or university. —DBS

SPECIAL LIBRARIES AND INFORMATION SERVICES

- 280. Bibliographical information work, an important stage in scientific research.**
G. I. Goldgamer. LLU TRANS. BULL.
2(5):387-417 May 1960.

This is an English translation of a Russian article in SOVETSKAYA BIBLIOGRAFIYA 1959(5) 11-27 stressing the importance of information services to scientific research. The work now being done in the USSR is described and recommendations for improving the information services in the future are given. —DTH

- 281. Biology news bureau.**
IND. HYGIENE DIGEST. 24(3) 1-2
Mar. 1960.

A biology news bureau has been established to serve biologists and professional organizations in the biological sciences and to provide information for the public. Office: American Institute of Biological Science Headquarters, 2000 P Street, N.W., Washington 6, D. C. —MB

- 282. Eastern translations in Austria.**
RUSSIAN TECH. LIT. 1(1): 12 Feb.
1960.

ARBEITSGEMEINSCHAFT OST is the name of an organization which has been formed by all existing Austrian scientific institutes, organizations, etc. Its activities and publications are discussed. —ARB

- 283. The future of information work.**
J. Faradane. ASLIB PROC. 12(5):191-
199 May 1960.

The rapid growth of science and technology has resulted in the need for specialists who can use and transmit the information. Some considerations for the future are further mechanization of information storage and retrieval, raising the standards of information work, and greater cooperation among organizations. —MT

THE MAIL BAG

(Starts on Page 93)

Mrs. Maria Patermann, Librarian, Benjamin Moore & Co., 134 Lister Avenue, Newark 5, New Jersey.

We would appreciate it highly if you could, as a very special favor, include in your next publication of Sci-Tech News our plea for the supply of the following publication:

Ellis, Carlton

2 Vols.

CHEMISTRY OF SYNTHETIC RESINS
Reinhold, 1935

The above book is out of print and all my efforts to obtain a copy from local used-book stores have been in vain.

We are willing to pay a nominal cash award in reciprocation for the supply of this work.

* * *

Clyde C. Hall, Public Information Officer,
National Science Foundation, Washington
25, D. C.

The National Science Foundation urges all U. S. scientific and technical information centers to cooperate in a survey being conducted by Battelle Memorial Institute for the Foundation. The survey is intended to locate all information centers in the United States serving the physical and life sciences and technologies and to collect factual data relating to their activities and services.

The Foundation will use the survey results to prepare a national directory of information centers and to relate the activities of the centers to the total U. S. scientific and technical information program. Information concerning location, subject coverage, scope of collection, and types of services available, etc., will be gathered by questionnaire.

The value of the survey and directory will depend upon the completeness of coverage. NSF, therefore, requests that any activity which identifies itself as an information center should send its name and address to Mr. William H. Bickley, Battelle Memorial Institute, 505 King Avenue, Columbus 1, Ohio.

* * *

Mildred Benton, Compiler, Bibliography
Digest.

At an informal get-together, during convention, with persons interested in bibliographies, the following points were raised relative to which it would be of interest to have an expression of opinion from Sci-Tech members. 1. Are reviews, of state-of-the-art, articles of sufficient interest and value, when they include a number of references, to be added to the Bibliography Digest? 2. Would a separate publication have an appeal if it listed more bibliographies (Sci-Tech News has space for only a small percentage of the

total) and perhaps review articles? 3. Should Sci-Tech News serve as a clearing house for bibliographies in progress? In other words, would it be helpful for the compiler of the Bibliography Digest to maintain a record of, and list bibliographies in progress. This would be successful only if Sci-Tech members contributed.

SCIENCE-TECHNOLOGY SERIALS

(Starts on Page 94)

\$60.00; Part B REACTOR TECHNOLOGY, 2 vols; \$40.00; there is the new Part C PLASMA PHYSICS, ACCELERATORS-THERMONUCLEAR RESEARCH, 2 vols. \$40.00.

POLYMER NEWSLETTER

V.1, no.1, Jan. 1959, bimonthly, \$25.00.

Chemical Marketing and Research Co., New York, N.Y.

Contains concise reports on important trends of the plastics and resin industry. Information is obtained directly from primary sources.

SOCIETY OF GLASS TECHNOLOGY. JOURNAL

Effective January 1960 published in 2 parts known as GLASS TECHNOLOGY, which contains reports of applied science in the glass industry, and PHYSICS AND CHEMISTRY OF GLASSES, that publishes reports of original studies of the physics and chemistry of glasses, both experimental and theoretical. Each section \$18.50 and both at \$28.00.

SOLID STATE ABSTRACTS

V.1, no.1, Current, monthly \$25.00. Cambridge Communications, Cambridge, Mass. Replaces and is an expanded version of SEMICONDUCTOR ELECTRONICS, an abstract journal which has been helping scientists and engineers to keep informed on technical developments. All subscribers to SEMICONDUCTOR ELECTRONICS will receive an immediate refund and new orders should be placed for this title.

SOVIET MATHEMATICS-DOKLADY

V.1, no.1, Jan.-Feb. 1960, bimonthly, \$17.50. Will appear in June 1960. Published by the American Mathematical Society under the sponsorship of the National Science Foundation. The journal will contain translations of the entire pure mathematics section of the DOKLADY AKADEMII NAUK, USSR. Translation of these articles will provide a comprehensive up-to-date survey of what is going on in Soviet mathematics, enabling American mathematicians to keep abreast of current developments in the USSR.

SPACE WORLD

V.1, no.1, May 1960, bi-monthly, \$3.00. Spaceways, Inc., New York, N.Y.

TSVETNYE METALLY

V.1, no.1, January 1960, monthly, \$95.00.

Primary Sources, New York, N.Y.

The Journal will provide full English translation of comprehensive reports of advances in the USSR and abroad. They will cover the theory and practice of nonferrous metallurgy.

WASHINGTON SPACE LETTER

Now known as MISSILE AND SPACE
CONTRACTS REPORT.

Published weekly at \$90.00.

**TRANSPORT PHENOMENA**

By Byron Bird, Warren E. Stewart, and Edwin N. Lightfoot, all of The University of Wisconsin. 1960. Approx. 816 pages. \$13.75.*

STATISTICAL THEORY AND METHODOLOGY IN SCIENCE AND ENGINEERING

By K. A. Brownlee, The University of Chicago. 1960. Approx. 600 pages. Prob. \$16.75.*

COMPARATIVE EFFECTS OF RADIATION

By Milton Burton, University of Notre Dame. In Press.

CONSTRUCTION CONTRACTING

By Richard H. Clough, University of New Mexico. 1960. Approx. 376 pages. \$9.75.*

NON-CRYSTALLINE SOLIDS:

Conference at Alfred, New York, September 1958.
Edited by V. D. Frechette, State University of New York, College of Ceramics at Alfred University. 1960. 536 pages. \$15.00.

BEHAVIOR GENETICS

By John L. Fuller, Roscoe B. Jackson Memorial Laboratory; and W. Robert Thompson, Wesleyan University. 1960. 396 pages. \$8.95.

THE SURFACE THEORY OF METALS AND SEMICONDUCTORS

Edited by Harry C. Gatos, Lincoln Laboratory, M.I.T., with the assistance of J. W. Faust Jr., and W. J. Laflaur. 1960. 526 pages. \$12.50.

HANDBOOK OF RESEARCH METHODS IN CHILD DEVELOPMENT

Edited by Paul H. Mussen, University of California. 1960. Approx. 1056 pages. \$15.25.*

DIGITAL COMPUTERS AND NUCLEAR REACTOR CALCULATIONS

By Ward C. Sangren, General Atomic Division of General Dynamics Corp. 1960. 208 pages. \$8.50.

FROM THEORY TO PRACTICE IN SOIL MECHANICS

Selections from the Writings of Karl Terzaghi.
With bibliography and contributions on his life and achievements, prepared by L. J. Bjerrum, Norwegian Geotechnical Institute, Oslo; A. Casagrande, Harvard University; Ralph B. Peck, University of Illinois; and A. W. Skempton, University of London. 1960. Approx. 432 pages. \$12.00.

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Elucidated by Stress Relaxation Studies
By Arthur V. Tobolsky, Princeton University. 1960. 313 pages. \$14.50

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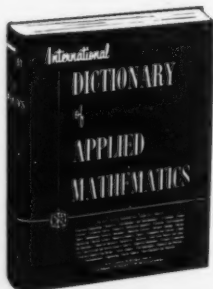
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